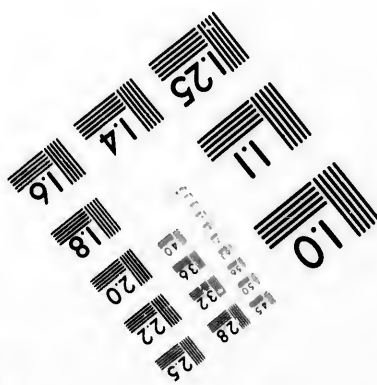
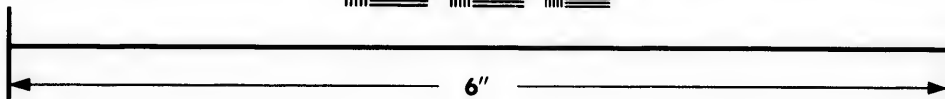
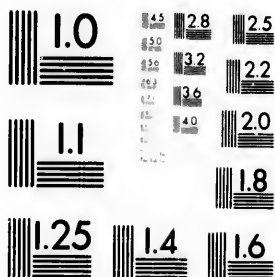


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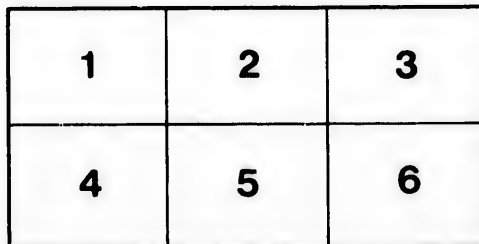
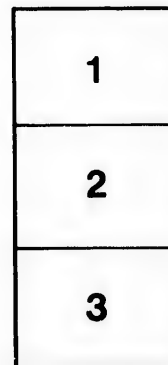
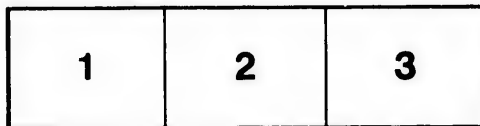
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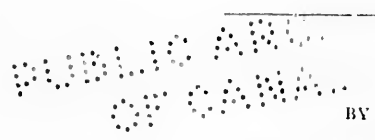
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DEPARTMENT
OF
COLONIZATION AND MINES

GOLD

IN THE
PROVINCE OF QUEBEC
CANADA



BY

J. OBALSKI
GOVERNMENT MINING ENGINEER

JUNE 1898

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GOLD.

INTRODUCTION.

The information we possess regarding our gold-bearing districts is scattered throughout numerous reports and documents, and, in order to be able to reply to applications for information on the subject, it has been deemed advisable to publish in abridged form the interesting facts which they contain and those which our personal experience has supplied. A map on a scale of a mile to the inch is added to this work and shows the territories still belonging to the Province.

LIST OF DOCUMENTS CONSULTED:

- Reports of the Geological Survey 1847-48-52.
- Report on the Chaudiere gold mines, by F. T. Judah, 26th September, 1863.
- Transactions of the Literary and Historical Society of Quebec, Rev. James Douglas, 18th November, 1863.
- Reports of the Geological Survey 1863 to 1866.
- The Gold-digger's Guide, by J. Bailey, 1864.
- The Gold Mines of Lower Canada, or Miner's Guide 1864. (Les mines d'or du Bas-Canada ou guide du mineur, 1864.)
- Report on the gold bearing lands of Canada, 1865. Printed by order of the Legislative Assembly, 28 Vict., Appendix No. 7.

Report of A. Michel & Sterry Hunt, February, 1866.

Extract from the report of the Commissioner of Crown Lands, 1866, by R. Pope, Inspector of Mines.

Report of the Geological Survey, 1870-71.

The Valley of the Chaudiere, by Dr. W. J. Anderson, 1872.

Reports of the Commissioner of Crown Lands, 1867 to 1886, inclusively.

Gold in Canada (from the columns of the *Quebec Morning Chronicle*, 1880.)

Mines d'or de la Beauce (Gold Mines of Beauce), by W. Chapman, 1881.

Special report to the Government, by W. P. Lockwood, with documents (not printed).

Return No. 128 to an address of the Legislative Assembly, dated the 25th February, 1889. (W. P. Lockwood's claim).

Reports of the Geological Survey, Summary Reports 1895 and 1896, by R. Chalmers.

The Gold deposits of the Eastern Townships, by Dr. R. W. Ells, Journal of the Canadian Mining Institute, January meeting, 1896.

The Gold-bearing Deposits of the Eastern Townships of Quebec, by Robert Chalmers, Journal of the Canadian Mining Institute, January meeting, 1897.

I must also mention a series of factums in the cases of O'Farrell & Venner vs de Lery; the Crown vs Dame C. F. Couillard and others (de Lery estate and Canada Gold Co); the opinion of the Honorable Judge B. Caron, in the latter cause, and that of Honorable Judge Ramsay on the validity of the de Lery patent.

LEGISLATION

In the Province of Quebec, the ownership of mines of gold and silver is vested in the Crown in all lands where such ownership has not been transferred by a special provision in the patent, that is to say, that the Crown still owns the mines of gold or silver throughout nearly the whole territory of the Province, including the seigniories, whatever may be the date of the issue of the patents. The seigniorial court set aside the reservation of mining rights made by the seigniors in conceding lands to their *ceusitaires*. We give below a list of all the lands sold for these purposes up to the 24th July, 1880. From that date when mines were sold for superior metals, gold and silver were also included in that denomination. I shall give, however, some explanatory details as to the legislation up to that date.

A regulation for the sale of gold mines, dated the 22nd April, 1864, decreed that the lands reserved for gold in the Chaudière and St. Francis divisions should be sold at \$2.00 cash per acre without settlement conditions, and that no royalties should be levied (see the Crown Lands report 1864.) That regulation was suspended in the month of May of the same year, and replaced on the 30th June by the act of 1864 and by the amendment of 1865, which regulated the manner in which gold mines should be worked under the license system, by granting small claims. Nevertheless some lots had already been bought under the first regulation.

An order-in-council of the 8th August, 1864, authorized the sale of lands in mining divisions for farming purposes subject to the condition that the price be raised to \$2.00 an acre when they were worked for gold mines.

An order-in-council of the 12th April, 1865, afterwards determined the question as follows: In selling the lands in mining divisions the Department shall distinguish, as far as possible, between *bona fide* purchasers for farming purposes and those who purchase for mining or speculative purposes, by selling to the former at the present prices and conditions (subject to the increase specified in the order-in-council of the 8th August, 1864, when worked for gold) and to the others at the price of a dollar an acre cash.

On the 11th May, 1874, another order-in-council regulating the sale of mining lots fixed the price at \$1.00 per acre. In 1878 the royalty was replaced by a tax of \$1.00 for each miner, valid for 3 months.

The Beauce mines seem to have been worked chiefly under the act of 1864, until after the validity of the de Lery Patent had been contested and maintained by the courts, when the general mining act of the 24th July, 1880, became the law in force; it reproduced the principal clauses of the act of 1864, but authorized the sale of lots at the price of \$2.00 per acre.

An order-in-council of the 10th December, 1885, raised the price of these lots to \$5.00 per acre. The act of 1880 was repealed and replaced by the mining act of the 30th December, 1890, which maintained the price of the lots, but imposed a royalty of $2\frac{1}{2}\%$ on the gross-weight estimated at \$18.00 per ounce. It regulated the prospecting and mining licences in a general manner and did away with the clauses respecting work by claims and licenses of the act of 1864. Finally on the 24th June, 1892, a new act that is now in force restored the principal clauses of the act of 1880, while retaining the license system, but without the inconvenience of the claims regulations, and increasing the price of lots in the vicinity of railways, but doing away with the royalty.

Here are some of the chief provisions of the Quebec Mining Law of 1892, 55-56 Vict., chap. 20 :

1426. Every proprietor of land sold for agricultural purposes, by letters-patent, previous to the 24th July, 1880, but without any reservation by the Government of the mining rights, or the legal representative of such proprietor, who discovers upon such land a gold or silver mine, may work the same, by paying to the Commissioner, over and above the price already paid for such land, a sufficient additional amount to make up the sum required by article 1444.

1443. No sale of mining concessions, containing more than four hundred acres in superficies, shall be made to the same person.

The Lieutenant-Governor in Council has, nevertheless, the right to grant to any person, upon sufficient proof of his capital and resources, a larger extent of territory, but not, in any case, to exceed one thousand acres.

1444. The price of mining lots, for entire lots giving the right to the surface and to the mines, is \$5.00 per acre, but that price is increased to \$10.00 if the mine be within a distance of less than 12 miles from a railway in operation.

The application for purchase must be accompanied by a specimen (1447) and by the price of the lot (1444). The patent or final title issues only when an amount of \$500.00 has been expended within the space of two years (1451).

Exploration licenses on Crown lands are granted with the right to purchase the mine for \$5.00 per one hundred acres in surveyed lands or by square mile in unsurveyed lands (1452 to 1457).

The Government also leases mining lands by means of mining licenses on payment of a fee of \$5.00 and an annual rental of per acre and such licenses are renewable *de jure*. The law fixes a maximum of 200 acres per person, but no minimum (1461).

When the land has been sold or in seigniories whatever may be the dates of the patents, except of course in the Seigniorie of Rigaud Vandrenil, the actual owners or the *co-usitaires* (tenants) have the first right to purchase or lease such mines, but they may be expropriated if they refuse to avail themselves of their rights and the Mining Law defines the procedure to be followed in such cases (1465 to 1490).

The discoverer of a mine on Crown lands has the right to mark such mine by pickets placed at the corners, but must at once give notice to the Inspector by making an application to purchase or for a license (1491 to 1493).

There are no municipal taxes on mines up to the year 1900 (1579).

In Beauce, there are a certain number of lots that were formerly worked under the license system, but the mines have not been alienated by that fact and the so-called reservations made by persons who have sold their lots are worthless as regards the Crown. For instance: A occupied a lot that he sold to B, who resold it to C. If the mining rights when the original patent was granted belonged to the Crown, the reservation of the gold and silver made by A, or by B, is of no value any more than the pretended rights that the companies may have had which mined on those lots and at present the Crown alone owns the rights over gold and silver and C, alone has the first right to purchase unless he has dispossessed himself of that right in favor of X, for instance, and even in such case if C, sold to D the Crown would have only to consider D as having the right of preemption and not X

unless the latter be the holder of a mining license obtained previous to such sale or that he have registered his title conformably to the provisions of the law concerning the registration of real rights and of article 1442 of the Mining Law. This is laid down in the following extract from a legal opinion of the Attorney General on the subject : " The surface proprietor of a mining lot may alienate his right of pre-emption and must, in such case, give notice pursuant to the requirements of article 1442 of the Revised Statutes of the province. He must, in addition, register the deed of sale of such right of pre-emption conformably to the registration laws."

HISTORY.

Gold was reported in 1835 to exist in the Chaudière Valley by Lieutenant Baddeley, of the Royal Engineers, (Silliman's Journal) when Claudine, daughter of one Gilbert, and now Madame Olivier Morin, found in 1834 a nugget as large as a pigeon's egg weighing 1066 grains 63 in the Gilbert river, near the Chaudière, but its effective discovery dates only from the year 1846. After that discovery, which was purely accidental, the de Lery family obtained from the Canadian Government by letters patent, dated the 18th September, 1846, the exclusive right to mine for gold in the seigniory of Rigaud Vaudrenil, Beauce. Mr Charles de Lery and Dr James Douglas of Quebec then began some surface washings on lot 75 of the 1st range North East of the Chaudière and established the presence of gold in notable quantities and even found some large nuggets.

The right to mine for gold in that seigniory was leased in 1847, in consideration of the payment of 25 per cent, to the Chaudière Mining Co. which worked on the Gilbert river and also in the bed of the Rivière des Plantes and obtained small quantities of gold.

In 1851-52 the Canada Mining Co regularly worked the gravel on the Riviere du Loup at St. George and obtained good results. These companies abandoned their works and down to 1863, parties of miners washed with pans or other quite primitive appliances, in the beds of the rivers. Several of these miners obtained extraordinary results. From that date the gold mining industry received a new impulse ; numbers of miners arrived in Beauce and worked chiefly on the Gilbert river on lots 16 to 21 of the de Lery concession, where they secured very good results by comparatively primitive means.

During that interval Dr. James Douglas, one of the leading shareholders of the Chaudière Mining Co., who subsequently became the sole owner of

the mining rights in the seigniory of Rigaud-Vaudreuil, transferred them in the summer of 1863 to Mr. Hans. Hagens and others of Quebec who assigned them to Mr. Truman Coman, of New York. The latter, after the 1st September, 1864, the date of the expiration of the lease, obtained a new one for 15 years from the 9th September, 1864. He then organized a company under the name of the "de Lery Gold Mining Company" which was incorporated on the 1st July, 1865, and obtained from the seigniors an extension of the lease for 30 years valid up to the 9th September, 1894, and renewable for the same term.

This company, which proposed to work the quartz, built near the Devil's Rapid on the Chaudière a quartz mill with 10 stamps, a portion of which is still in existence, that worked only a short time and does not seem, to have produced any good results. It also subdivided a portion of its territory into small claims which it sub-let to miners. Then began the legal difficulties between the companies, the miners and the surface owners, as the latter refused to acknowledge the validity of the de Lery patent. During this period law-suits and material obstacles of all kinds retarded the development of the industry. It was also in 1863 that searches were made for gold in the neighborhood of Sherbrooke and that the Goleonda Gold Mining Co., was organized in Ascot.

In 1865 the Reciprocity Mining Co leased from the de Lery Company the right to mine on a part of the Gilbert but met with little success in spite of rather extensive works. Nevertheless, like the de Lery Company, it rented claims to groups of miners who did surface work from a few feet to about twenty in depth and who, though working without any method and separately, obtained relatively considerable quantities of gold.

It was about 1866 that the first work was done in Ditton by Hon. J. H. Pope.

In 1867, Mr. W. P. Lockwood acquired a claim of about half an acre in superficies on the Gilbert and from that date began a systematic examination of the nature of the auriferous deposits, gradually increasing the extent of his operations by obtaining additional territory in such manner that in 1873 his rights extended over 18,000 acres forming sections 3, 4 and 7 of the Seigniory of Rigaud Vaudreuil and especially covering the river Gilbert and its affluents. These three sections comprised the concessions of St. George, St.

Gustave, St. Gaspard (from lot 1 A to 7 inclusively) St. Charles (from 1 to 41 B) 1st range N. E. (from 43 B to 83 B.)

In 1867-68. Mr. Lockwood had formed the Canadian and North-West Land and Mining Co. (limited) of which he was the principal shareholder. That company was wound up by voluntary liquidation in 1871 and he founded, in 1873, the Gilbert and Chaudière Gold Fields Company of Canada which, in the following year, became the Chaudière Gold Fields Company of Canada. During these five years (from 1867 to 1873) Mr. Lockwood caused numerous and important works to be done including about forty shafts in the valley of the Gilbert, especially on lot 15 of the de Lery concession, lots 74 and 75 of the 1st range North-East and by his works and returns he tried to ascertain the exact nature of the deposits as well as the origin of the gold which they contained. During that period only a few other miners worked.

The new company continued its operations until 1876. At the beginning of 1877, a fire destroyed the plant and work was suspended. Difficulties once more arose between the company, the owners of the soil and the Government because the latter granted licenses to work on claims of small dimensions. Under these licenses a number of miners and of small companies worked and found much gold, among others the St. Onge Company which worked successfully on lot 11 of the St. Charles concession, while the Lockwood Company worked on lot 12 of the same concession. The St. Onge Company afterwards sold a portion of its rights to the Messrs McArthur, of Toronto.

In 1878-79, Mr. Lockwood formed the Canada Gold Company represented by Mr. J. N. Gordon, and whose territory comprised lot No. 12. At that time law-suits and contests went on for the possession of lots that were rich in gold and occupied without the authorization of the owners of the mining rights, that is to say, the de Lery Company, represented, in the portion worked upon, by the Canada Gold Company. In 1880, the Provincial Government passed the Mining Act, and in 1881, it contested the validity of the de Lery patent before the courts and asked that it be declared illegal and be set aside. On the 22nd June, 1883, the Superior Court at Quebec dismissed the action and recognized the validity of the patent. That judgment was confirmed in appeal in 1884.

This period of the history of Beauce extending from 1878 to 1885 was the most flourishing and during it the work was carried on in the most

practical manner, the quantity of gold taken out being also very great. There were then as many as 500 men employed along the Gilbert by the following companies among others: Victoria Company on 18; Sand and Spaulding on 17; East Branch Company on 16; North Star Company on 15; Beauce Mining and Milling Company on 14; Clarence Mining Company on 13 of de Lery. There were also at work on lots 8 to 12 of St. Charles: the Canada Gold Company; the St. Onge Company, afterwards McArthur Bros; the Gilbert Mining Company, etc. In addition a number of companies of more or less importance worked higher up and lower down on the Gilbert as well as on the neighboring streams: The Bolduc, the Cumberland etc. Some small companies also worked on the Rivière des Plantes. Mr A. Conpal at the same time ascertained the value of the Ruisseau des Meules. On the Rivière du Loup, the Gold Mining Association of Canada and the Colonial Gold Mining Company carried on work to a considerable extent.

The Mining Act of 1880 defined the conditions under which work could be done on the Crown lands and on those of private individuals, but maintained the royalty of $2\frac{1}{2}$ per cent on the gross weight of the gold and silver obtained.

On the rich territories, the old companies had carried on work that was continued by the new ones which, as a rule, worked without the authorization of the de Lery Company whose titles were then contested.

Finally the judgment of the Court of Appeal, in December, 1883, definitively settled the question. As may be seen, the most important works had been done in the seigniory of Rigaud Vaudrenil and especially on the Gilbert. In other parts of Beauce some prospecting and exploration were done. In Ditton, county of Compton, the Pope Company worked regularly and obtained considerable quantities of gold, there being no dispute as to the titles. About 1881-82 a company under the direction of Mr. G. Humphrey tried to work the surface deposits on the Rivière du Loup at Jersey Point near the confluence of the Chaudière and du Loup rivers. In order to work the gravel by the hydraulic process he dug a canal $1\frac{1}{2}$ miles long with a head of water of 150 feet. That company was unsuccessful for several reasons too lengthy to enumerate here and had to abandon its works after having only succeeded in washing a portion of the gravel.

Some work was done by the St. Onge Brothers on Slate Creek de l'Ardoise near St. George where a shaft 165 feet deep was sunk. Subse-

quently Mr Humphrey worked in partnership with them and about the same time they did some work on the Pozer river in the Seignior of Aubert-Gallion. Important prospects were also made by small companies represented by Mr H. Sewell on the Rivière des Plantes ; by Captain Richard, on the Cumberland river ; by the St. Onge Brothers, on the Famine, and by Messrs Conpal and McArthur on the Ruisseau des Meules.

About 1886, we find the works in Beauce almost completely stopped. The legal question was settled and there was no longer any opening for small parties of miners in the seignior. The Canada Gold Company and McArthur Brothers obtained from the de Lery Company most of the rich territories and worked but very little themselves except on the Ruisseau des Meules.

In 1891, Messrs Chas. Rodrigue and Louis Mathieu began to prospect on the Hall Brook in Dudswell and on the Kingsey Brook, where they formed the Rodrigue Gold Mining Company. Their example was followed by other miners from Beauce who prospected with more or less success on the Row and Big Hollow Brooks and even in 1894, gold was found in a small vein of quartz, on lot VI, 13, of Westbury, the property of Mr. Harrison.

In 1892, we find some work beginning again at the mouth of the Rivière du Loup when Mr. E. B. Haycock tried to work the bed of that river and put up a small three stamp mill to test the quartz veins of that region. The work was continued by Messrs Blue and Eustis, but stopped in 1896. In the fall of 1895, Mr. J. Hardman began to drive a tunnel in the village of St. George itself to join the old works of the St. Onge Company on Slate creek. According to Mr. Chalmer this work was suspended at the end of 1897 and the tunnel was run for a length of 900 feet partly through boulder clay and quicksand.

The lease of the seignior of Rigaud-Vaudreuil having expired at the end of 1894, Messrs McArthur Brothers obtained a grant of sections 3, 4, 7 and 9, covering the Gilbert and the Ruisseau des Meules. In 1895, those gentlemen organized the American Company which did only a little work on the Gilbert.

In 1897 the Quebec Central Gold Field Company sank several shafts on the Rivière du Loup about three miles from its mouth, but obtained no results.

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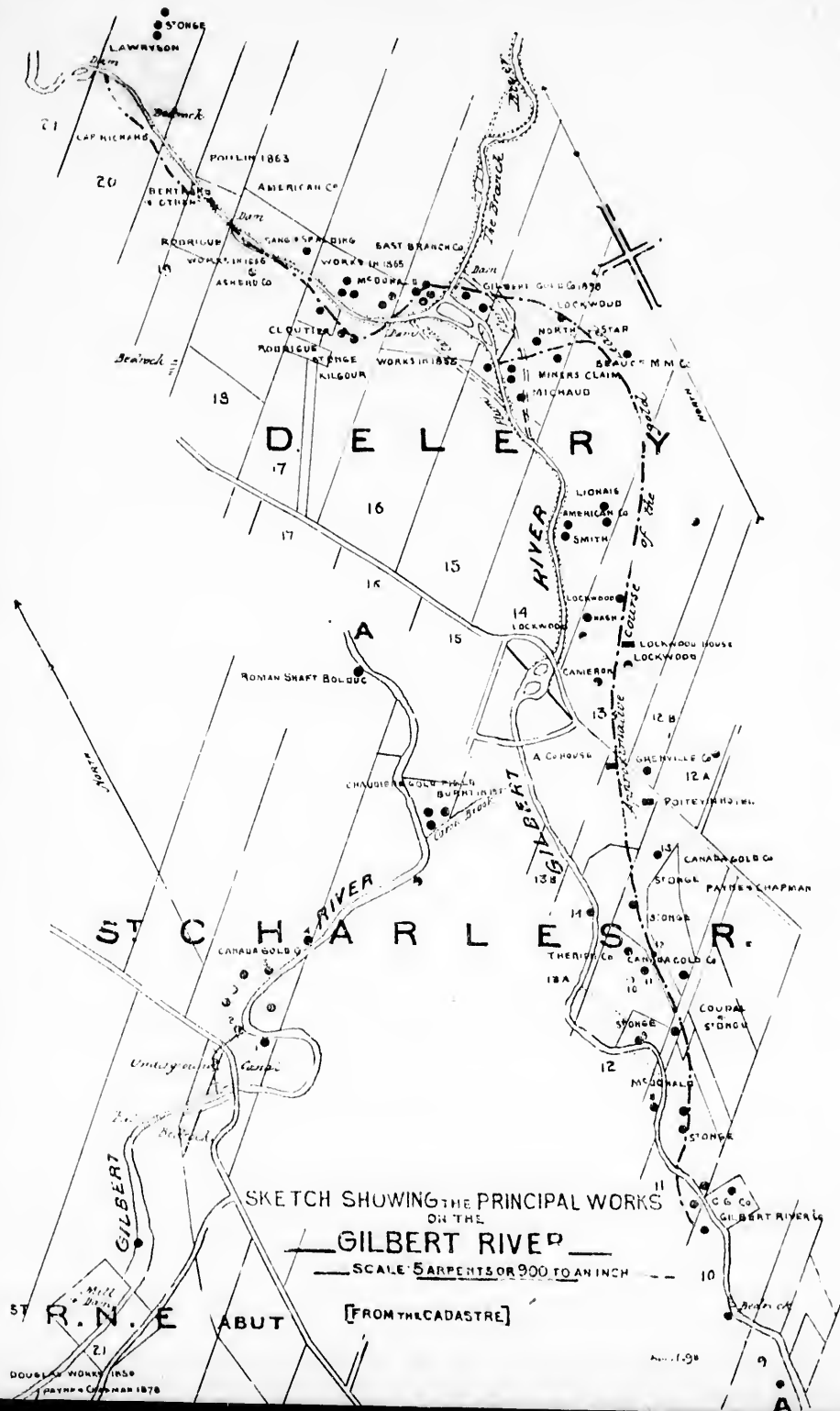
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SKETCH SHOWING THE PRINCIPAL WORKS
ON THE
GILBERT RIVER

SCALE 5 SARPENTS OR 900 TO AN INCH

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DOUGLAS WORKS 1859
PAYNE & CHAPMAN 1870

[FROM THE CADASTRE]

Nov. 1. 98

Finally, at the present moment, that is in 1898, we have the Gilbert Beauce Mining Company successfully operating in the old Gilbert works on lots 15, 16, 17 of de Lery.

On the Ruisseau des Meules, Mr Conpal continues to work with a few men and finds gold in paying quantities. In Shenley, at the great falls of the Chaudière, Mr Currie is prospecting on the outcropping gravel beds. In Duds-well work is being done on the Kingsey Brook and Big Hollow Brook. Some work to a slight extent is also being done in the neighborhood of Sherbrooke, near Rock Forest, especially on the Felton Brook, by the Rock Forest Gold Mining Company (limited.)

I give below, to the best of my knowledge, the information that I have gathered respecting the various works in Beauce and to make this work more intelligible I have classified them by districts or rather under the names of the rivers by which they are best known.

It is very difficult to trace back all that has been done and this report is necessarily incomplete, but I give all the descriptions of the works that I have obtained and the depth of the shafts, for these may be useful for working such portions as were then neglected.

SEIGNIORY OF RIGAUD VAUDREUIL.

This seigniori was conceded on the 23rd September, 1736, under the French régime and the right to the gold mines contained in it was granted on the 18th September, 1846. That right was recognized as valid by a judgment of the Superior Court of Quebec on the 22nd June, 1883, and confirmed by the Court of Appeals in 1884. This seigniori covers 71,000 acres on both banks of the Chaudière and was divided for mining purposes into 13 sections as indicated on the map. The mining right was leased to various companies as will be shown further on and it is now the property of the heirs of the de Lery estate. Sections 3, 4, 7, 9 covering the Gilbert River and the Ruisseau des Meules have been leased for 30 years from the 14th September, 1894, to Messrs. McArthur Brothers of Toronto. In this seigniori are situated, on the right bank, the rivers Gilbert, des Plantes and their tributaries and, on the left bank, the Rivière du Moulin and its tributary, the Ruisseau des Meules.

GILBERT RIVER.

This part of Beauce is the most important for it is there that the work

has been done which has led to the finding of the only old river bed known in the region and it has yielded not less than a million and a half of dollars.

This stream, which is only a brook that is nearly dry in summer, runs in a general direction from north to south which becomes south west two miles from its mouth; its length is about nine miles. It has two branches: the northern and the eastern, (the latter being known only under the name of "The Branch") which meet on lot 16 of the de Lery concession and take their rise at an altitude of from 500 to 600 feet above the Chaudière in Cranbourne and have no lake at their head. Towards the part that has been mined for gold, the altitude is about 300 feet and the river flows, after some slight falls, into the Chaudière where the bridge on the highway is only from 30 to 40 feet long. In the spring and fall the river brings down a fairly considerable body of water, but it soon dries up, leaving barely enough for the sluicing. Heavy rains cause it to rise somewhat rapidly.

As already stated, gold was discovered for the first time in 1834 near the mouth of the river; then more was found from time to time, and in 1846, the patent over the seigniory of Rigaud Vaudreuil was granted to the de Lery family. Up to the end of 1846 not more than \$300.00 worth had been found.

The first prospecting on the Gilbert river was done by Mr. J. P. Cunningham, in 1847 and in 1850 when three months work produced about \$1100.00, the largest nugget weighing 25 dwts. Work was carried on upon lot 75 of the 1st range N. E. at about a mile from the Chaudière river. Traces of that work are still to be observed below the Mill falls, especially an excavation made to divert the course of the river. The prospecting was done chiefly on the river lot in the neighborhood of the spot where Claudine Gilbert had found the first nugget. In 1865 a party of miners resumed the old works, but without much success. However, a nugget weighing 6 ounces was found. Several shafts were also sunk, one of 75 feet, by Mr. A. McDonald and others near the main road.

Other prospects seem to have been carried on before that date without great results along the river in the St. Charles concession.

Dr. James Douglas, of Quebec, seems to have been closely connected with the first operations in Beauce. On the 16th April 1850, he obtained a 7 years' lease of the mining rights over the whole seigniory and on the 12th May,

1851, he formed with other persons, among whom were Mr Hans Hagens, of Quebec, the Chaudière Mining Company which on the 24th December, 1852, obtained an extension of the 7 years' lease ending on the 1st August, 1864 and the first work done must have been with its co-operation. Dr Douglas seems to have subsequently become the sole owner of the mining rights which he transferred in 1863 to his associates, Mr Hans Hagens and others. The latter assigned their rights to Mr Truman Coman, who on the expiration of the previous lease obtained a new one for a period of 30 years dating from the 9th September, 1864. He then organized the *de Lery Gold Mining Company* which was incorporated on the 1st July, 1865. That company sublet some portions of its territory, thus giving rise to the organization of the companies that will be referred to further on.

Down to 1863 but little work of any importance seems to have been done except by the farmers, who washed the gravel on the banks of the rivers and found a little gold nearly everywhere.

The Poulin brothers seem at that period to have been identified with all the prospecting that was done and from all accounts they seem to have found fairly considerable quantities of gold, at least enough for a livelihood. In the autumn of 1862 one of them, Féréol Poulin, discovered a richer deposit on lot 19 of the de Lery concession and the three brothers set to work in May 1863, on the lot 19 in partnership with Narcisse Rodrigue, the owner of the land. The results of their prospects were so remarkable that other residents began to look for gold and, that season, not less than from 100 to 150 men worked in the district. The reports of that period mentioned above made by Dr. James Douglas and Mr. F. T. Judah, give an idea of the condition of the industry.

Mr. Judah, the mining inspector, says that in the summer of 1863 gold to the amount of \$18,000.00 was taken out, an average number of 100 men having been employed on 24 claims for three months and earning about \$2.00 a day. He says however that the amount may have been greater and the number of days smaller. The work was chiefly done on the south half of 19.

Lot 20, the property of Veilleux, seems also to have been one of the richest points and in fact the work was then done on lots 19 to 22 inclusively (but without much success on 21 and 22) from the spring to the middle of

July, when the miners were ordered to stop working, as the mines did not belong to them.

Then Messrs. Hans Hagens and Company acquired the mining rights and worked on lot 20 with Messrs. Brock and Perceval, while the south half of 19 was cut up into small claims and worked by the Poulin brothers, Rodrigue and others. The Rodrigue claim was 150 feet long and 50 feet wide and was sub-divided into smaller claims. On lot 20, washing was done with a sluice, but on the others with rockers and pans, the excavations barely exceeding 8 or 10 feet in depth and the gold being chiefly found in the crevices of the bed rock. About that time the surface of lots 20 and 21 was purchased by Dr. James Reed, who did barely any work, but sub-let to other miners. Messrs. Hans Hagens and Company, who worked for some time, claimed to have washed with the sluice an average of \$30.00 worth a day with 5 men.

In the various reports we find the following: A nugget worth \$110.00 was found. A party of six men say that they found 6 $\frac{1}{2}$ ounces in 2 days; another also of 6 men found 15 ounces in 3 days. Rodrigue and the Poulin brothers found 10 pounds of gold in 11 days in the bed of the river; then after leasing the claim abovementioned they continued to find gold, one nugget being worth \$200.00, the work of the whole summer yielding probably 24 pounds which, according to Dr Douglas, represented \$16.00 per man per diem for a period of 80 days. Later on, the same parties declared that they obtained with pans, with 4 men, 72 ounces of gold in a single day. Jean Mathieu, on lot 20, at a depth of 3 or 4 feet found \$500 in 4 days and afterwards on a neighboring claim, obtained \$400.00 in a few days. That claim was then worked by the Bertrand Brothers, and Steele & Company who obtained considerable quantities of gold, especially 46 ounces from the 14th June to the 2nd July. Maranda and others found 32 ounces in 3 weeks; Robert and others a nugget worth \$220.00; another worth \$80.00 was found on a claim in the vicinity.

In 1864 when the preceding lease for 14 years expired, Mr Truman Coman, who had obtained the unexpired portion of the lease from the first lessees, again rented the mining rights over the whole seigniory, dating from the 9th September, 1864, and organized the De Lery Gold Mining Company which was incorporated on the 1st July, 1865, and to which he transferred all his rights by a lease for 30 years and which was renewable.

This company performed some work in the region above mentioned and built, near the Devil's Rapids, a quartz mill with 10 stamps that was finished in March, 1867. Various veins were opened and a small quantity of quartz was put through the mill, but no result was obtained from this. The company sub-divided the east part of lots 14 and 15 into small lots known as miners' claims and afterwards granted the right to mine to small parties of miners. In 1865, it sublet to the Reciprocity Mining Company, organized in the United States by Colonel Rankin, the right to mine on lots 16 to 29 of de Lery until the expiration of the lease. That company sank a shaft on lot 16 of de Lery on the right bank of the Gilbert and sublet certain portions of its territory especially on lot 18 to small companies.

Mr. Michel, who visited the Gilbert in 1863 and 1865, reports as follows: In 1863, on lots 18 to 20, there were from 100 to 120 miners divided into parties who worked small claims by means of open excavations at depths varying from 10 to 15 feet. They left between them spaces that were not mined and the imperfect washing caused the loss of much gold. It is therefore probable that in order to utilize the whole of the land the Reciprocity Company undertook to drain the bed of the river and in the spring of 1865 it built a flume 1800 feet long, 4 feet wide and 3 feet deep. This work, which was still unfinished, was partly destroyed in July by an overflow of the river. After costly repairs, the bed of the river was worked from lot 16 to lot 18, but it is said that only \$2,500.00 worth of gold was obtained. Others claim, however, that a much greater quantity was taken out.

In the winter of 1864-65 about 30 miners, organized in small companies, mined on lot 18 on the left bank of the Gilbert by means of underground workings. In the spring of 1865 there were about fifteen shafts of a depth of from 20 to 25 feet and situated at a distance of from 50 to 100 feet from the river. The miners pumped out the water from their workings by hand with small Chinese pumps and ran it off into a common canal. This canal had been built by the Reciprocity Company from lot 19 to the Branch, lot 16 and they collected a toll of \$2.00 at first, then of \$1.00 per diem and per claim from the claim lessees who used it. These workings seem to have yielded a good quantity of gold chiefly found in the bed rock that was then broken up pretty deeply. The washing was done with rockers generally in the bottom of the shafts. Two shafts from 40 to 45 feet deep were sunk on a claim on lot 15 by one Michaud who seems to have obtained

a good deal of gold. He had to stop work on account of the difficulties respecting the titles.

In 1886, work was continued and Mr. R. Pope, the Mining Inspector, reported that about 50 men worked on lots 16 to 19 on claims leased by the Reciprocity Company and found gold. He estimated the yield at \$3.00 per man per day. The trouble always was the water. Messrs Power, Cansley and Coveney, dug a canal through lots 15, 16 and 17 of de Lery. This drain was finished in January, 1867; it was 1600 feet long and 3 wide; it was solidly timbered and well covered so that it could be used both summer and winter. The miners undertook to pay \$1.00 per claim per day until they abandoned their claims. There were then 30 claims leased by the Reciprocity Company and employing as many as 100 men.

At this time it was deemed necessary to have at the mines a permanent police force consisting of a sergeant and 12 constables, all mounted.

It was at this period that there were found on lot 16 of de Lery near the confluence of the Branch, the nuggets known as the "Kilgour-Nugget" weighing 51 ounces 18 dwts, 6 grains, worth, \$928.35 and the "McDonald Nugget" weighing 45 ounces, 12 dwts and worth \$821.56.

A great many shafts about 20 feet deep were then sunk in that region and gold was found in most of them. The workings were drained by the Reciprocity drain and by that of Power. Traces of the old shafts can still be seen; they were known as the Morrison, Menard, Blanchet, Poulin and McDonald shafts on lot 16 on the left bank; the Ned Sand, Leclere, St. Onge shafts on lot 17 on the left bank and Kilgour and St. Onge on the same lot on the right bank. The work on some of these claims was stopped through want of sufficient means to contend against the water and it is probable that pieces of rich ground still remain especially on lot 16 on the left bank above the Branch.

About November 1866, pending the completion of the Power drain, a steam pump of 6 horse-power capable of pumping from 300 to 400 gallons a minute was put up by Messrs Proulx and Dion, of Quebec. I mention this fact because it is the first steam engine that made its appearance in that district.

Mr. Pope estimates that in 1866 gold to the amount of \$8,700.00 was

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MCDONALD NUGGET

Nugget found in 1866 on the Gilbert river, lot 16 of the de Lery Concession; weight 45 ounces 12 dwts; value \$51.26; natural size; photographed from a fac-simile in the museum of the Geological Survey, Ottawa.

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taken out, representing the work of the last three months of the year, with a probable average of fifty men.

In 1867, the work continued with the same success, especially on lot 15 where a claim of 75 square feet, occupied by Mr John McRae yielded from July to October a total amount of 334 ounces of gold. That claim was also worked in 1868 and it is estimated that it yielded in all \$17,000.00; others say \$50,000.00. The Mining Inspector estimates that \$31,000.00 worth was taken out in 1867.

In 1868 about 150 men were employed at the mines and the yield for that year is given by the Mining Inspector as being 1395 ounces, 45 dwts, 65 grains. The claims then worked were from 25 to 50 feet wide on the river with a depth of 100 feet on both sides, the company reserving the bed of the river as far as the high water mark. They were worked for periods of from 6 to 12 months at a rate of \$2.00 per front foot.

From that date the Gilbert mines entered upon a new era.

In 1867 Mr W. P. Lockwood obtained a claim 200 feet by 50 on lot 13 on the left bank of the Gilbert, but it was subsequently claimed by Mr Nash who worked it and paid royalty on \$20,000.00 worth of gold, though it is asserted that he took out \$40,000.00 worth. Mr W. P. Lockwood then purchased lot 8 of St. Charles and afterward obtained other more extensive territories and commenced work. Shafts were sunk on lots 13 to 15 of de Lery and 8 of St. Charles; steam pumps were put up and on the 6th January, 1868, the Canadian and North West Land and Mining Company, (limited) was incorporated in England, having obtained the control of the following lots: First range North East 74, 75 and St. Charles 7, 8, 9, 10a, 10b, 11, 12, 13a; de Lery 13, 14, 15.

Work by small parties of miners was stopped, and at the end of 1868, there were on the Gilbert only Mr Nash and that company at work. The working of the quartz veins had produced no results and the mill was abandoned. In fact the de Lery Company had transferred its rights over the richest portions to the new company, while the Reciprocity Company retained its own.

A certain number of shafts were sunk to depths varying from 30 to 100 feet and steam machinery was imported from England for pumping and hoisting.

Mr. Lockwood has been closely connected with the history of the Gilbert from that period and I take the following facts from a report sent in by him to the Government.

He ascertained that the course of the old bed instead of following the present course, as it appeared to do, from lot 19 to 16, then continued in a southerly direction. The rock crops out in the river bed on claim No 20 and is found on the banks, at a few feet from the surface. With the view of following that course, shafts were sunk on lots 14 and 15 of de Lery and from 7 to 13 of St. Charles, steam machinery being used for hoisting and pumping.

At that time the company had 150 men at work. The bed rock was reached at several points. One of these shafts (Lockwood's) was sunk in rear of the Miners' claims at a thousand feet from the river near the line between 14 and 15 on claim No 16. The shaft was 75 feet deep, and gold was found in it in paying quantities, the bottom being 35 feet below the present bed of the Gilbert. A drift was carried in a north westerly direction, towards claim 15 for a distance of 90 feet where the workings on the Poulin shafts were struck and the abundance of water prevented its being carried further.

I give here a description of the shafts sunk on the Miners' claims by small companies that sub-let from Mr. Lockwood.

Between claims 14 and 19, the Poulin shaft, 64 feet deep, which yielded 284 ounces of gold.

Claim 12, St. Onge shaft, 69 feet, gold found ; the water compelled work to be abandoned.

Claim 22, a shaft of 75 feet ; the rock not being reached on account of the water.

Claims 23 and 24, a shaft from 56 to 60 feet ; bed rock reached but no gold.

Claim 18, 61 feet, Venereau shaft ; reaching gravel which was worked as far as the Poulin workings.

Claim 52, 9 feet, quicksand met with and work had to be abandoned.

From this region, the Miners' Claims, 620 ounces of gold were taken out down to July 1869.

Another series of works was next undertaken on lots 7 to 13 of St. Charles, with the following results :

Shaft No. 1, on lot 7, 44 feet deep through blue clay.

No. 2, lot 8, 54 feet of clay.

No. 3, lot 8, 38 feet of clay.

In these three shafts situated on the right bank, water invaded the works on striking the gravel which seemed to rise towards the North-East.

No. 4, lot 8, depth unknown, all in gravel.

No. 5, lot 7, 35 feet, 3 feet of surface, 32 feet of blue clay, water on striking the gravel.

No. X, lot 7, 64 feet of blue clay.

No. 6, lot 7, 35 feet, 20 feet of blue clay, 18 inches of sand, 8 inches of angular gravel, 13 feet of blue clay; filled with water on striking the gravel.

The four preceding shafts are on lot 7 on the left bank of the river.

No. 7, lot 10a, 70 feet of blue clay; the rock was struck without meeting gravel; a drift run in the direction of the river failed to strike gold, but established the fact that the rock rose in that direction; little water.

The following shafts were sunk on lot 12, No 8 being on the right bank and the others on the left bank. They all went down to the bed rock and met relatively little water. They form a very important group owing to the fact that they led to the discovery of the old channel in shaft No 12.

No 8, 60 feet of blue clay: 100 feet of drift on each side without meeting gold.

No 9, 9 feet of gravel, bedrock.

No 10, 25 feet of blue clay, bedrock.

No 11, 60 feet, 15 feet of surface, 37 feet of blue clay, 8 feet of sand and gravel, bed rock, a drift towards No 12 showed small quantities of gold.

No. 12, 64 feet, 18 feet of surface, 40 feet of blue clay, sand and gravel, bed rock; gold was found in this shaft in important quantities, yielding, in fact, at the beginning, 2 ounces per day.

No. 13, 40 feet of blue clay, rock.

No. 14, lot 13*a*, blue clay, rock.

All these works were executed by the Company, which, according to the reports of the time, obtained to the end of July 1869, a quantity of gold equivalent to \$13,540.00. These results seeming satisfactory, it was proposed to extend the operations on a larger scale; experts were sent out from England, among others, Mr. H. Robinson, who reported in favor of the importance of the region and made suggestions for its working by acquiring a still larger territory. Accordingly, in June, 1870, the Company obtained sections 3, 4 and 7 of the Seigneurie of Rigaud-Vaudreuil, representing 18,000 acres of land, less the lands of the Reciprocity and the following lots of Messrs Glover & Fry: Chaussegros concession, 16, 17, 31, 32, 33, 34; St. Gustave concession, 17, 18. During this year, there was no work done by individual miners. The Company sank several trial shafts on lot 8, St. Charles, but only a little gold was found in the surface workings; two shafts were sunk on lot 7, towards the mouth of Caron brook; water was encountered in abundance and it was only by the use of more powerful pumps that the bottom was reached in February 1871, at a depth of 100 feet. 1½ ounce of fine gold was taken from the bottom of this shaft; but the drifting showed that they were only on the rim; moreover, the water came in so abundantly that it filled the shaft, which had to be abandoned. This shaft was sunk through about 40 feet of quicksand composed of fine quartz which contained gold throughout its whole depth and rested on the gravel.

In the month of May, 1871, the Canadian North West Land and Mining Company went into voluntary liquidation, owing to the accidental death of one of its principal shareholders.

Mr. Lockwood, however, decided to continue the works and Mr. Egerton, an English engineer, having investigated the situation, he succeeded in 1873 in organizing the Gilbert and Chaudière Gold Fields and Mining Company of

Canada, which the next year became the Chaudière Gold Fields Company of Canada. The works were continued at different points and machinery was installed to prosecute them regularly.

About 1876, the chief workings were on lots 7 and 8 of St. Charles, near Caron brook, where were also located the houses, offices, stores, pumps and machinery, the whole representing a large sum of money. Several test shafts were sunk as well as a central working shaft. On the 2th January, 1877, a fire destroyed the greater part of the plant, the losses being estimated at \$35,000. In the absence of pumps the works had necessarily to be abandoned, whereupon Mr. Lockwood went to lot 12 upon which 5 shafts had been sunk, about 120 men being employed. About the same time he granted the right to work on lot 11 of St. Charles to different small companies, among others to the brothers St. Onge known under the name of the St. Onge Company, which then worked with great success. About this period, fresh legal difficulties arose, the Government granting licenses to work on the conceded lands.

In 1879, Mr Lockwood organized "The Canada Gold Company" which from 1880, was represented by J. N. Gordon. This company then prosecuted before the Mining Inspector the miners working without title and the Government was again called upon to interfere to obviate other complications. The works were continued on lots 12 and 13 of St. Charles down to 1883. At the same time other companies were working in the neighborhood. Six main shafts were sunk on the left bank of the Gilbert and were then known as follows : Gordon, 58 feet, Engine shaft, 63 feet ; Old Shaft, 68 feet ; Moodie's, 63 feet ; No 1, 78 feet ; Prideaux, 80 feet, all of which struck the bed rock and the pay gravel. According to the information at hand, all the gold bearing section was then worked in a systematic and thorough fashion over a breadth of 600 feet and for a length of 1200 to 1500 feet These shafts were supplied with steam machinery for hoisting and pumping and the gravel was conveyed by small tramways to three puddling machines, whence it was washed in sluices according to the usual methods. These works seem to have yielded a good quantity of gold, and in one of Mr. Lockwood's reports, we see it mentioned that \$65,855 worth was taken out of lot 12.

In 1882, these mines and the adjacent ones were flooded and abandoned, nearly all the profitable ground having been worked, and the company

washed the remainder of its tailings in 1883. On lot 8 of St. Charles, a shaft had also been begun which, at 76 feet before reaching the bed rock, filled in with quicksand, burying alive a workman named Romain Bolduc, on the 23rd October, 1882. Three other shafts had also been sunk in the S. W. part of lot 8, but failed to reach bed rock for the same reason. Mr Gordon, having abandoned the works, left for England and returned no more.

The validity of the De Lery patent having been maintained by the courts, the works on the Gilbert were abandoned by the companies that had no right and it was only towards 1891-92 that Mr. Lockwood again began working on lot 13 de Lery, sinking a shaft, utilising the old Ainsworth shaft and taking out gold; but, as the expiration of the term of the patent approached, he could undertake no work of any consequence and appears to have transferred his rights to others and to have abandoned the region.

I append some details on the operations of the principal companies who have worked the Gilbert down to the present time.

ST ONGE COMPANY

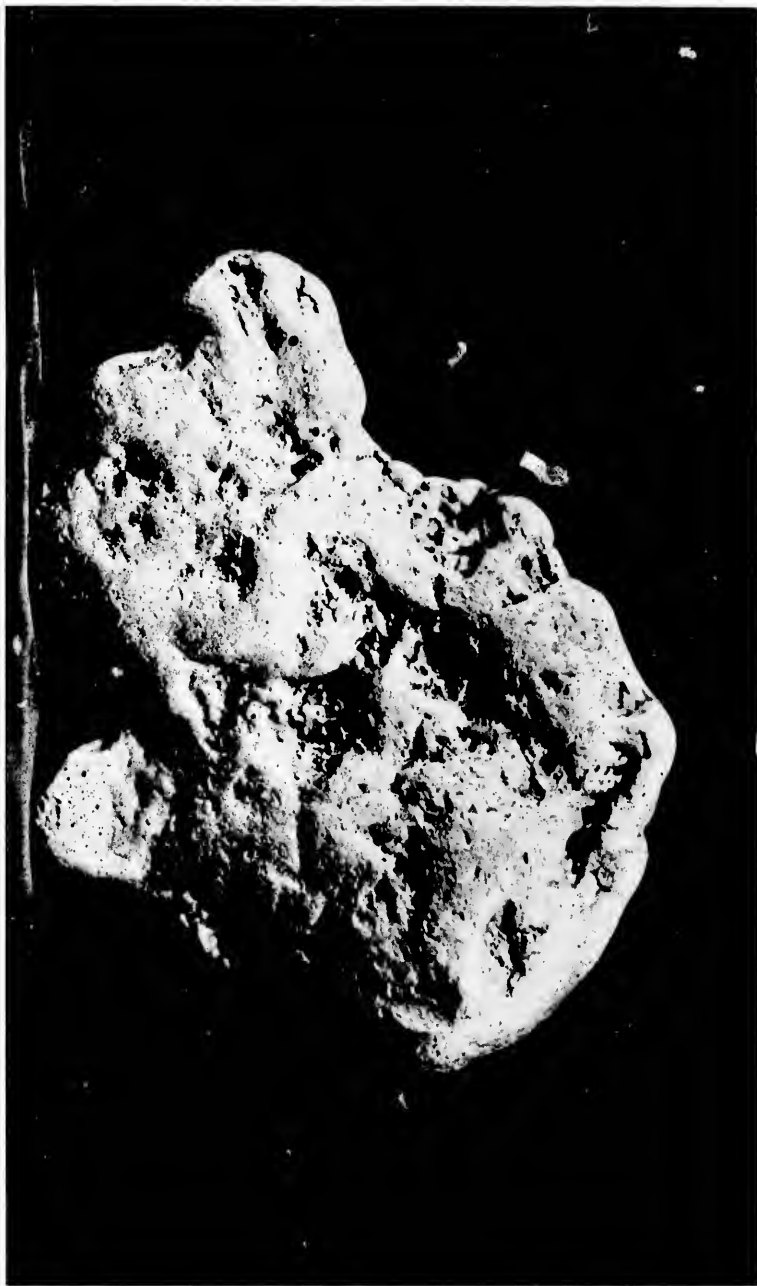
Mr. Noel Boissonnault alias Jack St Onge, had worked on lot 12, when gold was discovered there in 1869 and was consequently acquainted with the region. In 1876, with his brothers and other miners, he organized a small company and obtained from Mr Lockwood a claim on lot 11 measuring 600 × 135 feet. They sank a first shaft, but had to contend against the water which was very abundant. They thereupon constructed a flume of 1800 feet in length to work a water wheel and with the aid of pumps operated by this wheel, they succeeded in draining their works. They thus worked during several years and it is asserted that they took out \$85,000 worth of gold. The number of men employed varied from 25 to 75 and the work was carried on until 1879. At the end of November, 1876, the Mining Inspector reported that a shaft of 37 feet, had been sunk near the river, with drifts extending to a distance of 100 feet. The above mentioned pump was then in operation. The company employed 71 men and 10 ounces of gold were obtained. In 1877, another shaft of 50 feet was sunk and a third commenced, 30 men being employed, and at the end of June 222 ounces, 3 dwts, 12 grains of gold had been taken out over and above the quantity already mentioned.

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ST. ONGE NUGGET

Nugget found in 1877 on the Gilbert river, on lot 12 of the St. Charles Concession. Weight, 42 ounces; value, \$756.00; natural size; photographed from the original.

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The company continued their works, but as they encroached on lot 12, great difficulties arose with the owners of the latter. It was on lot 12 that they found in 1877 the 42 ounces nugget, worth \$756, known as the "St. Onge Nugget". 125 men were then employed. In the newspapers of the time (*Québec Chronicle*) we find some figures indicating this company's clean-up.

October, 16, 1877	.... 25 men	.... 8	days'work	.... \$1,200	00
August, 1, 1878	.... 50 "	.... 6	"	.... 1,400	00
" 12, "	.... 60 "	.... 7	"	.... 2,012	50
" 20, "	.....	.....	(98 ounces)	.... 1,750	00
" 30, "	.... 75 men	.... 8	days'work	.... 2,178	00
October,	....	.... 14	"	.... 3,600	00
"	....	.... 15	"	.... 3,000	00
"	.... 55 "	.... 12	"	.... 3,153	00
"	.... A nugget of 38 ounces	.....		.... 680	00

MESSRS. McARTHUR BROS.

Subsequently, towards the close of 1880, the St. Onge Company sold their claim to Messrs McArthur Bros. of Toronto who worked it themselves for about six months and secured only a small quantity of gold.

In 1882, these works, as well as the adjoining mines on lots 11 and 12 of St. Charles, having been invaded by water, the impossibility of emptying them out by means of pumps was recognized and this territory had to be abandoned. Other shafts were then sunk, particularly on lot 10, but without finding gold. For these reasons and owing to prolonged litigation respecting boundaries with a neighboring company, the Gilbert River Gold Mining Company, the works were suspended for a long while. About the same time, the Messrs McArthur had purchased the mining rights on section IX, comprising the Ruisseau des Meules where Mr Coupal had done some work which will be detailed further on. About 1886-87, they purchased from Mr Lockwood the $\frac{1}{2}$ section IV, covering a portion of the de Lery and St. Charles ranges. In 1892, they organized the "American Gold Company" which did some work under the direction of Mr F. Wadsworth on lots 14 and 18 de Lery. On lot 14, a shaft was sunk and supplied with machinery but was not pushed to bed rock. On lot 18 a small dam and a flume were built and the bed of the river, which at this point is little above the bed rock, was washed. The water retained by the dam was used to remove the earth over

the pay gravel and rich bed rock, which were subsequently washed. In 1894, there were 30 men employed and the works were being carried on upon lots 18 and 19, especially 18. \$3000 were thus secured, including a \$35 nugget. It was in this section that the first mining was done following the discovery of the precious metal on the Gilbert river. The bed rock cropped to the surface there and it was broken up to a great depth, one point being mentioned at which it was penetrated to a depth of 11 feet and gold was found. The works were continued during two seasons.

On the expiration of their lease in 1894, the Messrs. McArthur obtained a new lease for 30 years of sections 3, 4, 7 and 9, which they still hold and which cover the whole of the Gilbert, as well as the Ruisseau des Menles in rear of St. Francis. This company authorized several other small companies to work on its territory, among others David Leelere & Bros, who in 1895 took out from lot 18 de Lery \$434.00 worth of gold, including one \$60 nugget. In 1896 Messrs Edward & David Loubier, while prospecting on lot 17, found a \$65.00 nugget almost on the surface. In 1897, Mr. Stanley C. Currie worked for a few weeks on the same lot and secured \$135.00. At the same place, Mr. Edward (Ned) Sand washed for about a month and collected \$64. Lastly, towards the middle of 1897, McArthur Bros. authorized the company known as the Gilbert-Beauce Gold Mining Company to work on lots 15, 16 and 17 de Lery.

At present, the American Gold Mining Company is replaced by McArthur Bros.

THE GILBERT BEAUCE GOLD MINING COMPANY.

This company, whose promoter was Mr. Ph. Angers, of St. Francis, secured the right to work on lots 15, 16 and 17 de Lery. These lots are well known in the annals of Beauce for the quantity of gold found in them thirty years ago, especially on the McRae claim, lot 15, and the Kilgour and McDonald claims, lot 16, whence were taken the largest nuggets of the precious metal discovered in Beauce. Notwithstanding the work already done, there remained certain parts still unmined and it was proposed to tap them. The great impediment being the water, the company dug a drain of 1000 feet long, followed by a tunnel of 200 feet, which tapped the old McRae shaft, 22 feet deep, and thus drained this section. The drain traversed lots 14 and 15 in a northerly direction on the right bank of the Gilbert. The river was also diverted and flumed at the point where it passes over the tunnel.

On the occasion of my visit in October, 1897, the drain was about finished and they were preparing to continue it by a drift. There were about 25 men employed, partly old Beance miners, who were very hopeful of success and who were also members of the company, leaving half of their wages to be devoted to the payment of their shares.

The works, begun in July, 1897, were continued during the winter with 8 to 10 men and the dry parts of the old works were reached at the end of January, 1898, the work having been delayed by the inadequacy of the flume of the river, which caused the water to break into the works. This accident was remedied and a flume of 180 feet (5 x 6 feet) was built.

I again visited the works on the 15th March 1898. The bedrock had been washed with the rocker and 40 ounces, 32 dwts, 50 grains, \$751.60, had been secured; the gold was generally coarse, the biggest piece being worth \$12 and others worth \$8 to \$10. Work was proceeding then by a drift running north east in good gravel, which, by washing with the rocker during half a day with two men, yielded \$5 or \$1 to the cubic foot, 40 feet of drift had then been made. This drift was pushed 20 feet further, but the ground rose and the gravel became too poor to be worked at a profit.

A circumstance worthy of note is that the old workings, dating back to 1865, are still in good condition, the timbers especially being well preserved. The ice had broken up early in the streams that year, but the works successfully resisted the rise of the water. The Company decided to dam the branch and to build a flume of 450 feet to convey its waters lower down beyond the workings. This flume was 8 x 5 feet.

On the 3rd May, these works were completed; the drift above mentioned had been abandoned and the underground drain was being pushed ascending in the direction of the river; several old shafts and drifts of the Moodie works of 1883, and the old Power canal were thus tapped. All the workings were well drained, but little gold was found; about 5 or 6 men were employed in continuing the test drift. The total amount, secured to that date, was \$1064.00, in which there was one \$25. nugget.

The work was practically begun towards the end of January, 1898; before the third of May, the old shafts and the workings of Abbott, Smith & Dale, Reciprocity, Gregoire, Moodie and the Power drain had been traversed.

OTHER COMPANIES

In 1876, Messrs Christian Olsen, Ned Sand and Anthony Miller also worked alone a small claim on lot 11 of St. Charles and dug a drain. In 1877, they had sunk a 50 feet shaft and employed 18 men. Towards the end of June, they had obtained 75 ounces of gold.

In 1877, Messrs Wm. Chapman and Louis Rancour worked on the Olivier Loubier brook, a branch of the Bolduc brook, on lot 62 of the 1st range N E, but only got 2 ounces 7 dwts. Another brook is called Pierre Loubier, but no gold was found there.

We find the following information in Mr. W. Chapman's pamphlet for the period beginning 1878-79.

Following the success of the St. Ouge brothers, other companies purchased the rights of the farmers. Among others Payne and Chapman, Forgie, North Star, Victoria, Gendreau, etc., and difficulties ensued with Mr Lockwood. About that time, he ceded his rights to the Canada Gold Company, represented by Mr J. N. Gordon, who prosecuted the miners working without rights, which rendered them liable to a penalty of \$5 for every working day. The Government having taken the matter into serious consideration and having caused the general Mining Act, to be passed on the 24th July, 1880, new companies were formed, among others the Clarence Gold Mining Co (Ainsworth) on lot 13 de Lery; the Beauce Mining and Milling Co on lot 14 (W. J. Smart of New-York). In the same district, the Canada Gold Company itself also worked under Mr. Gordon's direction on lot 8 of St. Charles, while the St. Ouge properties were worked by Mr McArthur on lots 9, 10, 11, 12 of St. Charles.

During October, 1880, the quantity of gold taken out by the three companies, Clarence, Beauce and Canada, appears to have amounted to 681 ounces.

The following companies are also mentioned as working or prospecting in the De Lery concession.

East Branch Co., on lot 16.

J. Asher & Co., on lot 18 and 19.

Spaulding & Co., on 17 and 18.

C. Coupal, on the Branch.

Wilder on lots 29 and 30 of Chaussegros.

Home & Lionais, on the Bolduc brook, 1st, N.-E. 59 and on 14 de Lery.

Coté, Doris & Clontier on 17 de Lery, and 12 of St. Charles.

Cadot, Bernard & Co., in St. Charles, under the name of Santa Anna.

Power, Tomlinson & McDonald, on 11 of St. Charles, under the name of Eureka Company.

McNichol & Osgood, on 75 of the 1st range N.-E., unimportant prospects.

Poulin & Bernard, at the Devil's Rapids.

About 1878-80, Captain Thomas Richard worked with success for a company on the right bank of the Gilbert on lots 20 and 21 and found a good deal of gold. A dam and a ditch of 1000 feet were made. In this section, the bedrock outcroppings in the river and all the working was on the surface. In 1863, the Bertrand brothers, of Levis, had already worked for 7 or 8 months below No. 20 and seem to have found considerable gold. Other small prospects were made there and are still being made every summer, the gold being easily got owing to the slight depth of the bedrock. Captain Richard carried on somewhat important works during a couple of years and seems to have pretty well cleaned up all that side of the river, but I am ignorant of the quantity of gold obtained.

On the other side of the river on lot 21, below the dam, Lawrysson & Co worked about 1875-76 and also seem to have secured a large quantity of the precious metal.

It is related that they worked one summer in a little open cut ascending towards the hill, at a depth not exceeding 8 feet and that they took out from \$2000 to \$3000 worth of gold, including one \$700 nugget; but I have been unable to verify the fact. They took their water from lot 24 and washed by the hydraulic method or by grand sluicing but this work appears to have been done only upon a small surface. The same company had previously worked on lot 19 where they sank a shaft to a depth of 40 or 50 feet and then abandoned it on account of the water.

Later, the St. Onge brothers, in rear of these workings, on lot 21, and at about 500 feet from the river, sank 3 shafts of from 50 to 60 feet at a distance of 60 feet from each other. They struck, it is said, some good gravel, the centre shaft showing a little gold, but the water prevented further operations.

This section seems rich and later operations showed the gold to be rather abundant; for instance, it is said that below the dam on 21, \$600 worth were found in 10 square feet. Three or four years ago, in the river, on lot 20, a group of 3 miners appear to have found \$300 worth in 8 days.

It would seem that higher up than lot 21, not enough gold is found to pay for the working; nevertheless in 1880 Mr. Wilder, of Boston, sank 2 shafts of 50 to 60 feet on the left bank on lots 29 and 30, of the Chaussegros concession and found, it is said, gold bearing gravel resting on the bedrock, but was prevented from continuing by water.

Later again, in 1891-92, a 35 feet shaft, 6 x 4, was sunk on lot 30 of the Fraser concession by Mr. Sam. Byrnes for Messrs. Taschereau Fortier and P. F. Renaud. The boulder clay was found resting on the bedrock, the shaft being located at 20 feet from the river, where signs of gold had been found.

I have procured the following further information relative to the operations of 1878-79 :

VICTORIA COMPANY

This company, in 1878, worked the part of lot 18 de Lery on the right bank of the Gilbert, where they sank a shaft of 65 feet from which the gravel was hoisted and conveyed to the river by a tramway 200 feet on length. In the fall of 1878, Mr Louis Gendreau became a partner in this Company and in 1879 the sole owner of the mine. He acquired other lands in the neighborhood, put in a puddling machine and sank between lots 18 and 19 another shaft of 34 feet, at the bottom of which he states that he found a \$19 nugget and continued to work, taking out that year, it is claimed, \$1500 worth of gold. He then, that same year, sold his rights to Messrs Asher & Co, who tried to connect the two shafts already mentioned by a drift; but their work does not appear to have been profitable, for they abandoned it.

NORTH STAR COMPANY

This company, organized by Captain Richard and others, sank in 1878 on lot 15 de Lery a shaft of 85 feet, which seems to have offered difficulties owing to quicksand. They succeeded however in reaching bedrock, steam pumps being used. The works were continued until the close of the litigation and an important amount of gold seems to have been extracted.

At the same time, Mr. McRae returned to work on his old claim below this shaft putting up a water wheel to pump it out, and secured a good quantity of gold.

LOT 13 DE LERV

This lot has always been looked upon as rich and numerous shafts have been sunk on it by different companies. Mr. Nash had obtained the grant of this lot, as well as of 14 and 15 from the De Lery company. About 1867, he sank a shaft of 60 feet near the line of lot 14 and secured a very large quantity of gold estimated at \$40,000. Later, Mr. Lockwood sank another of 55 feet a short distance away and found gold.

About 1878, Payne and Chapman sank a shaft of 50 to 60 feet which they supplied with a water wheel for pumping purposes. They worked for 2 to 3 years and took out a good quantity of gold. Messrs St Onge, Brissette & Co also worked on this lot and sank a shaft of 65 feet. They then transferred their rights to Messrs Bernbé, J. A. Cameron and others. A couple of shafts were sunk but owing to legal difficulties, Mr Cameron does not appear to have continued the work. The Cameron shaft was continued by Mr Chas Lionnais, who subsequently sold out to the Clarence Gold Mining Co.

About 1880, this company undertook a regular system of working under the direction of Mr. S. J. Ainsworth, who sank on the hill side, a shaft of 90 feet, put in steam machinery, pumps, tramways, puddling machines &c., and appears to have secured important quantities of gold, for we note in the Inspector's reports, a quantity of 734 ounces, 18 dwts, 10 grains or \$13,129.75 worth, taken out to the 1st November, 1881. This Company and the others of that day appear to have worked until 1883, when the decision was rendered upholding the validity of the de Lery patent. This lot was next worked by Mr. Lockwood who sank his last shafts in 1892 and found gold.

He worked in his old shaft on the top of the hill and made another one at the foot of the hill near the first works, finding gold.

On this lot, the first shafts were sunk on the very bank of the river; afterwards on the hill near the road and it seems that important quantities of gold were taken from all the workings. About 1878-80, a ditch was made which took the water from the Branch, supplied it for washing purposes to all the mines on the hill and extended to the river as far as lot 13 of St. Charles.

LOT 14

Mr Nash, who had obtained this lot from the De Lery Company, did some work on it near the river about 1867, but without success. He appears to have granted a claim to Mr Smith, who sank 2 shafts in the same section without striking the bedrock. A Mr Fenton appears also to have sunk a shaft about the same period. Later, a shaft was begun on No 52 of the Miners' claims, but at a depth of 9 feet quicksand was encountered and the works had to be abandoned. About 1878, the De Lery Company, having become the proprietor of the surface of this lot, sold it to Mr Chas Lionnais, who put down a shaft near the line of 13 and struck the bedrock at 64 feet, finding gold. He then sold out to the Beauce Mining and Milling Company which under the direction of Mr Walter J. Smart sank in the upper part of the hill a shaft of 90 feet (8 x 5.) These works lasted several months and the greatest difficulties were encountered in sinking through 40 feet of quicksand. The bedrock and pay gravel having been struck probably in the middle of the course the drifting then turned North towards lot 15 for a distance of 200 feet and 75 feet on each side of this drift was worked. The operations lasted for 16 months and I am informed that from \$75,000 to \$80,000 worth of gold was taken out. The company stopped in 1881 in view of the probable issue of the litigation which was to dispossess it. This mine was equipped with steam machinery and pumps, tramways, puddling machines, placed near the sluice from the Branch and the works were carried on in a systematic and practical manner.

In 1893, the American Gold Company, under the management of Mr. F. Wadsworth, began a shaft near the old Lionais shaft. This shaft was equipped with steam machinery and pumps, but was not sunk beyond 36 feet when the company suspended operations. The plant is still there in

good order. Mr. Ph. Angers, in partnership with Mr L. Dubroca, having obtained permission to work on this lot, has completed the shaft and has recently struck the bedrock at 50 feet, finding a little gold.

ST. FRANCIS GOLD MINING COMPANY OF CANADA

This company worked about the spring of 1880 on the Bolduc stream, lot 59 of the 1st range N. E. Mr Chs Lionais seems to have been connected with this undertaking. A shaft was sunk striking the bed rock at 47 feet. Work was continued for three weeks, yielding \$1200. The works were invaded by the quicksand and another shaft was sunk to the same depth and also yielded gold: it was likewise filled up by the quicksand. The same company worked below the falls of the Gilbert and also sank several shafts on the Ruisseau des Menles.

LOT 76 OF 1ST RANGE NORTH EAST.

Below the Mill falls on lot 76 of the 1st range N. E. work was carried on about 1882 by Messrs Payne and Chapman in the bed of the river or its immediate vicinity. The bed rock is of slight depth and there was an abundance of water. Traces of former workings are still to be seen, especially on the left bank and the old works are still visible, among others a chanel to divert the course of the river, made by Dr Douglas previous to 1863. In this vicinity and at a short distance from the highway the first nuggets were found. As a result of the above works a fair quantity of gold, including some large nuggets, was got out but particulars are wanting. The St. Francis Gold Mining Company seems to have done some work in this region and in its prospectus it says that when the mines were first worked 3 men in 15 days took out \$1800 worth, among which was a nugget worth \$260.00.

In this same region it appears that other works were done at various periods and at the beginning, about 1865, some shafts were sunk towards the highway; one among others, near lot 73 or 74 by Archie McDonald, was 75 feet deep, the clay resting on the bed rock.

Mr H. J. J. Duchesnay, the Mining Inspector, gives the following list of the companies working or prospecting on the Gilbert in October, 1882:

Canada Gold Co., Limited	.....	Lot 8 St. Charles
McArthur Bros.	.....	" 9-10-11-12, St. Charles

McDonald & Co.....	Lot 11 St. Charles
J. A. Camerou (formerly Brissette Co).....	" 13 de Lery
American Chaudière Co., (Dupuis & Busque).....	" 16 and 17 de Lery
Grenville Mining Co. of Ontario, Fenton & Dinwoodie.....	" 12 de Lery
The Santa Anna (Cadot, Bernard & Co.).....	" 11 St. Charles
H. S. Porter & Co.....	" Devil's Rapid
East Branch Co.....	" 16 de Lery
Beauce Mining and Milling Co. (Walter J. Smart, Manager).....	" 14 de Lery
Cloutier & Co.....	" 16 de Lery
G. Therrien & Co.....	" 12 St. Charles
Sands & Spaulding.....	" 17 and 18 de Lery
John McRae & Co.....	" 15 de Lery
Gilbert River Gold Mining Co. (Capt. Thos Richard).....	" 15 St. Charles
H. McGinnis.....	" 13 St. Charles.

To this list we may add the following companies which worked in November, 1881, according to the same authority :

St. Francis Gold Mining Co.—lots 59, 11st range N. E. (Boldue Creek and 76 of the same range.

Clarence Gold Mining Co., (S. J. Ainsworth, Manager) lot 13 de Lery.

North Star (Capt. Richard, Man.) lot 15 de Lery.

As well as the companies working in 1880 :

The Almonte Co (Tomlinson and others) which afterwards became the Gilbert River Gold Mining Co., 11 St Charles.

Lawrysson & Co., 21 de Lery.

Asher & Co., (formerly the Victoria Co.,) 18 and 19 de Lery.

In 1882 the workings of the Canada Gold Co and McArthur Bros. were flooded and the mines had to be abandoned.

Mr. Porter who also worked at the Devil's rapid, sank that year a shaft 87 feet deep on lot 11 of St Charles, on the right bank of the Gilbert, but found only blue clay on the bed rock.

Messrs Bernbé and Chs. Coupal worked in 1882 and 1883 on lot 16 of de Lery, on the Branch ; they built a dam, sank a shaft and also made a drain. Finding nothing in the first shaft, they sank a second where they found gold in paying quantities. In 1884 a small company took up these workings, sank another shaft and ran a drift 80 feet long towards the N.-E. finding gold, but in small quantities.

THE GILBERT RIVER GOLD MINING COMPANY

About 1878-80, Messrs A. McDonald, Power and Tomlinson sank a shaft of 35 feet on lot 11 of St. Charles on a small strip of land on the left bank of the river ; they worked a short time under the name of the Almonte Co., and apparently with some success ; then they transferred their rights to a groups of residents of Sherbrooke who formed the Gilbert River Gold Mining Co., under the management of Capt. Thos. Richard. The gold-bearing lead seems to cross the river on the land of this company which worked with considerable success on both sides and in the river bed. Three or four shafts were sunk on the right bank to depths of from 40 to 50 feet and the mine was fitted out with steam engines and pumps. It was stated, prior to 1883, that gold to the amount of \$125,000.00 had been taken out of these workings.

In 1883 the company employed 40 men ; it had built a long wooden flume and thus used the water to drive a wheel which helped a steam pump to drain the workings. The mine seemed to be very productive and that season, a nugget was found weighing 22 ounces. The pay-dirt taken out during the winter of 1883 and that of 1884 yielded \$28,000.00. These works were stopped during the year 1885 and then Capt. Richard directed his operations towards the Cumberland river. The auriferous lode of the workings on the right bank seemed to have petered out and the results of a long suit for defining boundaries with McArthur Bros., put a stop to the works.

In 1886 the Gilbert River Gold Mining Co went into liquidation and its lands reverted to the Canada Gold Co, which authorized Capt. Richard to continue his prospecting in search of the lost lead. At his death which occurred shortly afterwards, Messrs McArthur Bros., who became the owners, authorized their agents to continue the search and the result seems to have led to the re-discovery of gold and consequently encouraged the performance of further works.

In 1883, the Grenville Co. of Ontario (Fenton, Maugr.) worked on lot 12 of de Léry and during the summer it washed the stuff taken out in the previous winter. This Company's shaft was 85 feet deep. It is said that a considerable quantity of large nuggets were taken out.

In the same year Messrs McGinnis & Co washed for some months in the bed of the Gilbert on lot 13 of St Charles, with good results.

Other small parties of miners also washed during the fine season ; among others, Power, McDonald & Co, J. Lefavre, W. Potvin & Co, O. Dion, Cloutier, etc.

In 1884 some groups of miners still washed and on some days were successful, among others: McRae & Co, G. Dion, C. Coupal, H. Power & Co. Mr. E. Fenton worked in the bed of the river in the neighborhood of the old mines and washed the old tailings.

Messrs H. Sewell, W. Moodie and W. Prideaux on lot 16, below the Branch, sank 2 shafts about twenty feet deep which they supplied with powerful pumps and worked towards the old Power channel. They got out gold to the amount of \$2,500.00. It was their old workings that the Gilbert Beauce Gold Mining Co came upon in 1898.

In 1886 the question of titles in the seigniorv was finally settled. The Company to whom the grant was given was the De Léry Gold Mining Co which had sublet the greater portion of the rich territory to the Canada Gold Co and the Messrs McArthur Bros. These Companies reserved to themselves the right to work and no longer authorized small parties of miners to do so. Consequently at that date mining was almost entirely interrupted on the Gilbert. There was only Mr. Fenton who worked in the bed of the river, but many individuals washed the old tailings with pans and earned a livelihood.

The work was suspended for some years on that river ; then we find Mr Lockwood doing a little work on lot 13, in 1892 and Messrs McArthur Bros., also under the name of the American Co., (whose operations will be detailed below after those of the St. Onge Co.,) and finally the Gilbert Beauce Mining Co.

If we resume the history of the works on the Gilbert river, we find three very distinct periods : first, the discovery of workable surface deposits on

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GROUP OF NUGGETS

Found on the Gilbert river; natural size. Photographed from the originals in the museum of the Geological Survey, Ottawa

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lots 18 and 19, followed by some underground works on lots 17, 16 and 15 of de Léry. All these workings were easy and small groups of miners worked at them and found a profit in them when not disturbed by the water. That part of the Gilbert river was alone considered productive. Afterward Mr Lockwood came provided with sufficient capital, and undertook a series of deep shafts, from 80 to 100 feet in depth; in the first place toward lots 15, 14 and 13 of de Léry; then on lots 7 to 13 of St. Charles and being supplied with powerful pumps by means of which he could reach the bottom, he established the presence of gold on lots 15, 13 of de Léry and 13 to 7 of St. Charles. This may be said to be the true industrial discovery of gold on the Gilbert. Finally from 1876 to 1883 the era of regular mining set in; several important companies carried on work, mining in a systematic manner and extracting; much gold, among others: the Beauce Gold Mining and Milling Co., on 14, the Clarence Gold Co., on lot 13 of de Léry; the Canada Gold Mining Co., on 13 and 12 of St. Charles; the St. Onge on lots 12 and 11 and the Gilbert River Gold Co., on 11, etc.

According to the miners' reports, at the extremities of this district, that is to say, above lot 21 of de Léry and below lots 8 and 9 of St. Charles, the course of the auriferous lode is lost or at least has not been found again. However, we again see gold found above and below in the region of the Gilbert. There is therefore reason to suppose and to hope that other works judiciously carried on will again reveal the presence of gold in abundance outside of the aforesaid limits. The course of the gold in this region may be defined as follows: Starting from the right bank of the Gilbert on lot 10 of St. Charles at a depth of about fifty feet, it crosses the river running up towards lot 11, then attains a depth of about 80 feet, covering a great width varying from 500 to 600 feet and even more on the left bank of the Gilbert on lots 12 and 13; it then runs in an almost northerly direction, still following the left bank and seems to narrow or to divide near lot 15 of de Léry, turning then in a northwesterly direction. Its depth below the surface has gradually decreased, being there from 40 to 50 feet, and as it goes up it falls away to 20 feet, afterwards becomes nil about lots 18 and 19. After passing the Branch it crosses the Gilbert about lot 17 and follows that river, ascending to lot 19 where it crops out on the surface, the direction then appearing to be north north-west. It continues on the right bank on lot 20 to the dam on 21 where it seems to cross the river. This course is observable and well-defined and it seems to me reasonable to suppose that it is not

limited to that small space and that one may expect to find other rich sections in the same region.

As a rule a gold lead, or an old river bed, is identified by means of the actual course near which it is found. Work is therefore done in the vicinity of the said water course. But it seems to me that the old rivers may have had an entirely different course from the present ones, and consequently searches should extend much further. Formerly, in the lower part of the Gilbert, Mr Douglas and afterward Messrs Payne and Chapman found plenty of gold and yet that part is completely separated from the upper portion of the river by a series of falls and rocky out-croppings. We may therefore suppose that it is connected with the lost course in the upper portion of the river by a section that has not yet been worked. It has been suggested that prospects be made by means of borings and, as a matter of fact, I believe, that such work would produce excellent results and give at least an idea of the underground topography of these formations. However, we must not lose sight of the fact that the deepest points are not necessarily an indication of the course of a lead as exemplified on the Rivière du Loup and the Ruisseau des Meules where gold is found at a level much higher than that of the deep places in the vicinity.

RUISSEAU DES MEULES

This brook runs in a north-easterly direction and falls to the left into the Mill river on lot 45 of the first range south west in section 9 of the seigniory of Rigaud Vandrenil. The part specially worked on follows lot 45 and is comprised between the Mill river and the concession road. Gold has also been found above the road. Some was washed in this brook and in the Mill river before 1878 and we can even see that some shafts were sunk on the bank of that stream. About 1878 two shafts 80 feet deep were sunk on the right bank and near the road by Mr Haley and colors were found on the bed rock. About 1880 another shaft 53 feet deep was sunk on the left bank by Mr Compton, but without any result.

Mr A. Compal then began to work on this brook with Mr Louis Mathieu and found gold for many years. At the same time he sank a shaft 42 feet deep on lot 50 on the left bank of the Mill river through 30 feet of clay and 3

feet of gravel resting on the bed rock, but it contained no gold. He afterward sank two other shafts 13 and 18 feet deep on lot 45 near the Ruisseau des Meules to the right of that brook and in the latter shafts he came upon 5 feet of gravel and some colors.

Messrs McArthur Bros had obtained the right of mining over that section and Mr Coupal continued his working and sank two shafts on the left bank near the middle of the lot to a depth of 50 feet, but without any practical result. A remarkable fact to be noted is that the bed rock appeared a few feet to the north east in the brook where gold had been found and afterward dipped suddenly to the north west. These shafts were in the neighborhood of the old Compton shaft.

In 1885 another shaft was sunk on the same side but lower down and it struck gold. In 1886 a tunnel was excavated to drain this shaft, the water from which was then pumped out by a water wheel and a steam pump; it was completed at the end of 1887 and work was continued in that tunnel until 1891.

Up to that date gold to the amount of \$4,200.00 was taken out, three nuggets being worth \$65.00, \$112.00 and \$154.00 respectively and six others from \$40.00 to \$50.00. When I visited this mine in 1889, 4 men were employed and great difficulty was experienced in overcoming the quicksand which is very abundant in this region.

After 1891 Messrs McArthur seem to have ceased to take interest in these workings and Mr Coupal continued to work for a year with 2 or 3 men, in an irregular manner, finding a little gold. He afterward abandoned it for some time; then in 1896 he resumed work in the brook lot above the spot where one Pomerleau had also prospected. From that time he washed, each year, with one or two men and found gold in paying quantities, one nugget weighing nearly one ounce. He found \$100.00 worth in 1896 and \$500.00 worth in 1897. The work was all done on the surface and the bed rock was met at a depth of 7 or 8 feet with a little gravel. This brook contains but little water and supplies just enough for surface washing and for sluices.

The auriferous course which seems parallel to the bed of the Ruisseau des Meules was struck by means of a shaft 80 feet deep that crosses the schists and rejoins the bed already worked by a small drift which was run down a distance of 115 feet. The mine is drained toward the Mill river

by a tunnel 800 feet long already mentioned, in a south-westerly direction. The formation above the gold-bearing gravel presents still greater difficulties than in the other mines. The cross section of this formation seems to be as follows :

Arable soil	
Clay and boulders	30 feet
Fine sand mixed with boulders.....	20 "
Clay	10 to 15 "
Cemented gravel.....	10 to 12 "
Quick-sand and water that cannot be kept out.....	10 to 12 "
Gold bearing gravel	
Schist (bedrock)	

The width of this basin in the vicinity of the drain is about 100 feet with a rich portion of 25 feet that can be mined. The thickness of the gravel is very slight ; the gold is nearly always found in the fissures of the bedrock whose stratification runs nearly in the direction of the auriferous course. It seems to be established that a depression exists there which has been traced over a distance of a mile to the south-west by the two other shafts of 58 and 60 feet sunk in 1885 which did not strike the bedrock and by the old Compton shaft of 50 feet sunk in 1880. Bedrock is found with gold in the brook, that is to say, to the south-east. It dips rapidly and is afterward covered by the superficial hillocks where it is lost to sight. I have gone over this brook several times and have observed that gold was found on it over a distance of more than a mile. A small shaft 8 feet deep was sunk above the road to the right by the St. Onge brothers and yielded good indications, a \$2.00 nugget being found. Several years ago Mr Germain Bolduc even found on the road, about 60 yards to the right and 30 feet above the level of the brook, a nugget mixed with quartz which was estimated to contain \$50.00 worth of gold.

On the whole it may be said that this region gives good indications and might be profitably mined by deep workings. The quantity of gold got out of this brook exceeds \$5000.00. The mining rights over these lands have been leased to Messrs McArthur Bros.

RIVIÈRE DES PLANTES

This river is a good sized stream ; it flows with a rapid current broken by

several large falls in a south westerly direction and runs through a formation containing bands of diorite and serpentine in which a little asbestos has been found. At certain points, especially on the right bank behind the old mines and also below the first falls, species of dykes of white garnet are found. In the latter, the Report of the Geological Survey of 1863 states that gold is visible; I have also found in it small quantities of sulphide of antimony. In the upper part of the river boulders of the same rock are found. About two miles from its mouth is a branch of considerable size flowing in a north westerly direction called the *Sainte en Peine* river. A branch of the latter, called the Black River, starts from lot 62 of St Charles range and runs parallel to the Rivière des Plantes. The gravel of this river is noted for containing much black sand and the cause of this may probably be found in the fact that, at the head of the river, there is a considerable deposit of magnetic and titanite iron. In the early days of the gold mining here it was examined from a geological point of view by Professor H. V. Hinds, of Boston.

This river was worked by the Chaudière Mining Co. organized by Dr James Douglas, probably from 1847 to 1850, and below the first falls he worked for several weeks getting from 3 to 10 ounces of gold per day; the total yield being from \$2,500.00 to \$3,000.00. Very thick deposits of gravel are mentioned as existing here and it was then considered that they might be worked by the hydraulic process.

Mr Michel, in his report of 1866, says that small groups of farmers worked in the summer of 1865, finding gold abundantly in the same region and he mentions one group of miners who in 20 days found from 8 to 19 ounces of gold.

In 1867 Mr Nash prospected on the Rivière des Plantes, but the result of his labors does not seem to have encouraged him to continue.

About 1879 Messrs Mathieu, Bérubé and Gendreau prospected and found good indications on this river. Later on, they organized with others, including Mr Juras of St. Francis, a company known under the name of the "Rivières des Plantes Company." In 1882 two companies worked on this river and erected dams and flumes which were carried away by a freshet the same season. At the same time Mr A. Poulin prospected and is reported to have found some ounces of gold.

During the winter of 1883-84 the Rivière des Plantes Company worked

on Mr Siméon Doyon's land on the north east side of the river. A shaft 26 feet deep was sunk in which a nugget worth \$18.00 was found on reaching the gravel; but the water came in too fast and it was abandoned. Afterward a shaft 32 feet deep and a tunnel to drain the work were dug higher up on the hill. Gravel was again met and about \$150.00 worth was washed with the rocker. Preparations were then made to work by the hydraulic process, but in consequence of difficulties with the neighboring miners the work was stopped and was not resumed.

Messrs A. McKenzie and others worked at about the same time on the same lot on the other side of the river. The bed rock is of slight depth there and they did surface work by grand sluicing or by the hydraulic process. They seem to have found a considerable quantity of gold which has been stated to me to be worth from \$1500.00 to \$1800.00.

In 1884 Messrs H. Sewell & Bacon worked at the same spot and also sank, at a distance of half a mile from the highway, some shafts which struck the gravel at a depth of 25 feet. This undertaking does not seem to have been a financial success, as it was afterward abandoned.

Messrs Proteau and others under the name of the "Canadian Company" worked on the same lots, on the same side as and below the McKenzie works. It is said that they worked for 2 or 3 months in 1884 and found about \$700. The work was done on the surface, the bedrock being met at a depth of 6 or 7 feet only. This company subsequently suspended work for the same reason as the Rivière des Plantes Company.

Mr Jos. Létourneau dit Polette worked in the bed of the Rivière des Plantes. He made a drain 200 or 300 feet above the first falls. Messrs Payne & Chapman also worked on this river and sank a shaft. On the left bank of the south-east branch in 1877-78, a shaft was sunk on lot 45 B of St. Charles by Mr David Roy, but it does not appear to have had great results. On Black River, on lot 26 of the augmentation of St. Gaspard, Mr Jos. Poulin's lot, 2 shafts 20 feet deep were sunk by Mr Louis Mathien. Later on another shaft was sunk by the St. Onge brothers. These workings seem to have struck the bedrock, but I do not know that they produced any good results. Traces of former workings may also be observed in the same region.

DEVIL'S RAPID

This rapid is in the Chaudiere River a mile above St. François. In this region the rocks crop out along the river for a distance of about a mile and at low water they are partially uncovered. This place is well known to the miners who wash here with pan or rocker. Some small groups have even been organized to work on a larger scale by completely draining one side of the river by side dams and hand pumps. Large quantities of gold were found, but for some years the de Lery family, the seigniors, to whom the bed of the river belongs, no longer permit such work to be carried on. On the left bank a tunnel was dug in the hill by Mr McDonald, probably about 1875-76, for a length of 80 feet. Later on, in 1882, Messrs Louis Blanchet, Hilaire de Billy and others continued the tunnel which I am told was carried 250 feet, following the bed rock which descended. At the end of it gold to the amount of \$80.00 was found, one nugget weighing half an ounce. About 1864 Mr J. O'Farrel disputed the validity of the de Lery patent and claimed the ownership of the rapid, a portion whereof was subsequently granted him by the de Lerys, the seigniors. Some work was done to find alluvial gold especially by Mr H.-S. Porter in 1883, but the greatest importance attached to this rapid was due to the presence of a vein of quartz running across the river in which it was asserted that native gold had been found.

In 1852 the Canada Gold Mining Company sank a shaft from which they extracted quartz mixed with galena, blend, mispickel and pyrites which are mentioned in the Reports of the Geological Survey as containing a certain quantity of silver. Dr. S. Sterry Hunt also mentions the probable presence of a small quantity of native silver. His assays of the galena alone showed 32, 37 and 256 ounces of silver to the ton. He supposes however that the last result might be due to the native silver. The rapid was worked to a considerable extent by the Poulin brothers who found a good deal of alluvial gold in it and claim to have found nuggets of gold in the vein worth as much as \$8.00. Mr Hans Hagens also states that after he had some mining done in the vein, he saw gold. Mr O'Farrell relates similar facts and says that in 1860 he himself detached from it a piece of quartz containing gold. In 1861 the water having been diverted from a portion of the vein he asserts that the Poulin brothers mined on behalf of some persons who wished to form a company and that a considerable quantity of quartz was got out showing a good deal of gold. I mention all these facts, but personally I have seen no gold in this quartz.

In 1881, M. O'Farrel organized a company called "The Devil's Rapid Gold Mining Company" but I am not aware that this company did any work of any importance. That portion of the rapid now belongs to the O'Farrel estate and no work has been done there for a long time.

All the above applies to the Seigniory of Rigaud Vaudreuil and we give below particulars relating to other rivers in the Valley of the Chaudière.

RIVIÈRE DU LOUP

The Report of the Geological Survey of Canada for 1863 gives the details of the work done in 1851-52 towards the mouth of the Rivière du Loup by the Canada Gold Mining Company under the direction of Captain Richard Oatey. According to this information, in 1851 gold to the amount of \$1,826 was got out and in 1852 to the amount of \$2,496, say 2880 dwts making a total of \$4,322.00 with a considerable quantity of black sand that was estimated at nearly a ton; 9 nuggets weighed 468 dwts, the largest weighing 127 dwts, and the work was done over about three quarters of an acre, the gravel being 2 feet thick. Mention is also made of platinum, osmium and iridium having been found, but in too small quantities to allow of their being worked. In the summer of 1852 the Geological Survey also caused some prospecting to be done which yielded gold to the amount of \$124.

All the foregoing work was chiefly done on the left bank and on the edge of the Rivière du Loup near the spot where the bridge now stands.

The work was subsequently suspended and in 1859 we find the Napanee Mining Company in the same region sinking a shaft through schists, but necessarily without any results. I understand that this company had also done some work in previous years, but we have no information as to its success.

From the Report of the Committee of Enquiry of 1865 we obtain the following information: Mr Arthur Rankin prospected the Rivière du Loup from the Metgermette to the township of Risborough and washed in about

fifty different places, finding gold everywhere. He also found some on the Metgermette river and the Travellers Rest River.

Mr. S. L. French says that he found a good panning on the left bank of the Rivière-du-Loup, some miles above its mouth, at a height of 150 feet above the river. On the upper part of the Portage river, as on the Rivière-du-Loup, he found large nuggets, a hundred feet above the bed of the river. He explored the Portage and Metgermette rivers.

We find no other works mentioned until 1879, when the Colonial Gold Mining Company worked near the mouth of the Rivière-du-Loup, in the township of Jersey.

The Colonial Gold Mining Company, under the direction of Mr. Henry Philips, with Mr. Alex. Stuart as engineer, was organized in 1879 to mine on lot 638, forming Jersey Point. They built two dams 500 feet wide on the Rivière-du-Loup, one at its mouth; about 700 feet from where the present bridge now stands and the other where the Haycock mill is. These two dams were made to dry up that portion of the river as far as the Chaudière. A canal 700 feet long and 12 feet wide carried the water below the second dam. A little gold was got after 5 or 6 days' work below the dam and when a nugget worth \$200.00 was found near the upper dam, difficulties arose with the neighboring company, the Gold Mining Association of Canada, which led to the destruction of the upper dam and a law suit that brought about the liquidation of the company.

About 1878, Mr. A. A. Humphrey had explorations and prospects made on both banks of the river from its mouth to the Gold Stream and obtained gold in sufficient quantities to justify the organization of a company. The prospecting was done chiefly with the view of employing the hydraulic process previously recommended by Sir Wm. Logan. Consequently, with the aid of English capitalists he formed The Gold Mining Association of Canada and in 1881, he commenced building a canal 11 1/2 miles long to tap the waters of the Rivière du Loup; this canal situate on the left bank rejoined the river near lot 1, Kennebec Road range, section A of Jersey. The water after flowing through a canal 9,300 feet long, continued through steel pipes 15 and 11 inches in diameter. The head of water thus obtained was 215 feet, but up to lot 9 (Jules Jacques), a head of 185 feet of water was effectively utilized. The

work was completed in the summer of 1882 and mining was begun on the gravel beds situate on lot 10 of Linière and 654 of the Cadastre of Aubin de l'Isle, and known respectively as hydraulics No 1 and No 2. In rear of hydraulic No 2 a shaft 66 feet deep was sunk down to the rock and showed a great thickness of gravel.

The hydraulic working was carried on during the two seasons of 1882 and 1883, for that kind of work could not be carried on in winter. From 10 to 15 men were employed, but while the canal was being dug about 80 men were at work and ten carts. The quantity of water that could be supplied was 57 gallons per second, say a pressure of 5.7 atmospheres or about 80 pounds to the square inch. It was projected by a nozzle with a diameter of from $4\frac{1}{2}$ to 6 inches as required and could wash 1500 tons of gravel or clay in the 24 hours. It was estimated that the gravel might yield 10 cents per ton, the workable thickness being from 30 to 40 feet. The tailings contained much black sand and pyrites containing a high percentage of gold. The sluices were 36 inches wide and 20 inches deep. A first sluice was 114 feet long with a slope of 0.062. For a length of 26 feet the bottom consisted of perforated sheet iron and the fine stuff fell into a second sluice 96 feet long with a slope of 0.0418. Mercury was kept in the riffles in the centre over a length of 48 feet. The sluices were cleaned up every 15 days.

We are not aware of the quantity of gold that was obtained from these works, but we may infer that the results were not satisfactory either on account of the small quantity of gold that was found or because the apparatus did not work properly. In any case, after working this gravel in the summer of 1882 and in 1883, the company went into liquidation and abandoned its works and its properties. This company had the control of lots 640 and 645 of Aubin de l'Isle and from 1 to 11 inclusively of the Kenebec Road range of the township of Jersey on the left bank, of lot 653 of Aubin de l'Isle to 12 inclusively of the 1st range of Linière on the right bank of the Rivière du Loup.

Mr Humphrey afterward directed his attention to the Slate brook and Pozer creek, as will be explained elsewhere.

It seems fully established that the large gravel beds on the Rivière du Loup contain gold, but it would appear that at the points where they were worked the rock is below the bed of the present river, hence the diffi-

culty of reaching the richest portions of these deposits by the hydraulic process.

From that period work on the Rivière du Loup was abandoned for some years and it was only in 1890 that Mr Louis Gendreau began some work on the former property of the Colonial Gold Mining Company. In 1892 he induced Mr E. B. Haycock to take an interest in his works and the latter prospected along the Rivière du Loup, especially on the left bank, and found that the portion which it would really be advantageous to work was in the bed the river itself. He then built a dam on the left bank, on lot 638, opposite of lot 652 of Aubin de l'Isle, and a wooden flume of 750 feet (8 x 4) to carry off the water of the river. In the dry season of 1892, he sank a shaft 19 feet deep; he struck the rock, but not the lowest point of the river, and, in spite of all the work done and of all the pumps used to drain that shaft Mr. Haycock does not seem to have been able to work at the bottom for more than a few hours during the season; just enough to ascertain that there was a little gold. This mode of working was therefore abandoned also and Mr. Haycock confined his operations to washing on the banks of the river in the dry season. At the same time, he studied the quartz of that region and for that purpose he put up a small three-stamp mill driven by steam which is still standing on the left bank near the dam. This mill was in operation during the fall and a portion of the winter of 1894 and quartz from various veins was tested, as will be explained in the chapter on quartz.

In 1894, Mr. Haycock entered into arrangements with Messrs John Blue and W. C. Eustis respecting his rights to certain lots on the Rivière du Loup. Those gentlemen sank shafts on some veins and kept the little mill in operation during several weeks in December 1894 and January 1895 under the direction of an expert. The work was abandoned at the end of 1895 and has not since been resumed. At the same time Mr. Blue did some prospecting on the alluvial deposits near the Gold Stream, lot 12 of Linière. Mr. Gendreau afterward continued to prospect alone in that region and in 1896 he succeeded in inducing some persons to take an interest in his work and organized The Central Quebec Gold Fields Company, with the object of finding again the former bed of a river that he supposed to run across the present bed about lot 9 of the Kennebec Road range, section A, in Jersey. He therefore sank on lot 10 five shafts in an almost north-easterly direction. These shafts struck the rock at depths of 22 feet, 32 feet, 64 feet, 40 feet and 45 feet. A drift 70 feet long was run to the south west toward the hill at

the bottom of the shaft 40 feet deep, but no auriferous gravel was found. The 64 feet shaft came upon quicksand and water which stopped the work during one season and in the winter of 1898, steam pumps had to be employed to drain it and reach the bottom. On the other side of the Rivière du Loup, on lot 12 of Limière and near the river, he also sank a shaft which, at a depth of 12 feet, struck the rock, but without any gold. These various works seem to have thoroughly investigated a cross section in an easterly and westerly direction and as no auriferous gravel was found, Mr. Gendreau abandoned his theory as to that place.

I give below the section of the deepest shaft :

Arable soil	1 foot
Clay and gravel	6 feet
Gravel containing a little gold	6 "
Clay	27 "
Boulder clay	32 "
Clay	24 "
Rock	

To complete the information on the Rivière du Loup, I may mention that previously, on the same lot 9, a shaft 45 feet deep was sunk by the St. Onge Brothers which struck the bed rock without finding gold and that washing to a somewhat considerable extent was done on lot 9 by Mr. Humphrey.

In 1897, while prospecting with the pan, Mr. H. Nagant found a nugget worth \$20.00 on lot 6 of Jersey.

At present, the works on the Rivière du Loup are suspended.

FAMINE RIVER

This river is one of the most important of the region. It flows into the Chaudière in a south westerly direction with a considerable volume of water and has several notable tributaries, the Cumberland and Abenakis rivers, among others. Its course is broken by several falls of considerable size, one 40 feet high on lot 6 of Watford and a series of falls about two miles from the Chaudière giving a head of water of 70 feet. Very favorable opinions are expressed regarding this river. We are not aware of the

quantity of gold taken out of it, but we are led to believe that it was considerable.

About 1850, the Chaudière Mining Company obtained the right to work on the Famine river, but did only a little prospecting. The residents, however, seem to have worked regularly and to have obtained gold.

Mr. de Bellefeuille, Mining Inspector, reports that, in 1864, he granted 22 mining licenses on the Famine, which would lead us to infer that work to a somewhat considerable extent was done there.

In the Report of the Committee of Enquiry of 1865, Mr. Edward Lyons, M. E., says that he prospected on the Famine on lots 6 and 20 of ranges III and IV of Watford and that in the vicinity of the Grand Falls he washed and found gold. He adds that in the immediate neighborhood of those falls several pounds of gold had already been obtained.

We see in the same report that in 1864, Dr Reed and Mr Geo. Desbarats had prospected in Watford on lots 4 and 5 of ranges III and IV. They worked at the foot of the falls during a couple of seasons with about twenty men and reported having found \$1400; one nugget weighed four ounces. Later on Mr James Park began to dig a canal to divert the course of the river on the left bank at lot 20. He found a little gold, but stopped working.

Subsequently, in 1867, an area of about 5,000 acres covering both banks of the Famine was sold by the Government to Mr. Thos. McGreevy, but no work was done on it. These lands have since become the property of Mr. John Breakey.

In the summer of 1869, some prospecting was done in the township of Watford and shafts were sunk on lots 5 and 6, but the bed rock does not seem to have been reached.

About 1877, Mr. T. C. Reece prospected probably on lot 6 (Lawrisson), and seems to have obtained a certain quantity of gold. A shaft 60 feet deep was also sunk probably on lot 3, between the Abenakis river and the Famine river, through soil that was difficult to penetrate on account of quicksand. Gravel and bed rock were struck and some gold was found. The work was continued for two years.

The St. Onge Brothers, after abandoning the Slate Creek, began operations on the right bank and near the mouth of the Famine, by driving a tunnel starting from the river. This work was abandoned the following year, probably through want of means, very little gold having been found.

CUMBERLAND RIVER.

This is one of the tributaries of the Famine. In 1885, Captain Richard, after abandoning the Gilbert, went, in Mr. Beemer's interest, to work on that river, on lot VI. 6 of Cumberland *sic*. He found good indications and sunk 2 shafts, one on each side of the river. That on the left bank was 66 feet deep, and struck pay gravel; he ran a drift 130 feet long from which he got out 12 ounces of gold, one nugget being worth \$4.00, but I am not aware of the total quantity obtained from this working, which lasted a couple of seasons.

SLATE CREEK

It is claimed that, about 1860, gold was found on this creek and among it a nugget worth \$80.00.

About 1880, Messrs Poulin and Fortin worked there and found gold by panning.

The St. Onge Brothers had also prospected there before that date. After Mr. Humphrey's ill-success on the Rivière du Loup, he joined them and afterwards secured financial aid from Mr. W. A. Allan.

They prospected in the spring of 1881, and having ascertained by their works the importance of this district, they began to work there after having acquired several lots.

In 1883, they sank on lot 600 of the cadastre of St. George a shaft 117 feet deep, the bottom of which was 85 feet below the bed of the present river and struck the bed rock which, at that spot, dips 40 degrees, and found a little gold. They excavated 10 feet in the rock and then ran a drift, but found that the rock dipped still more. They also began to dig a drain at the foot of the hill, but only thirty feet were made.

The shaft that they sunk was provided with steam machinery and pumps. In the spring of 1884, when they had exhausted their resources and had spent \$5,000, they applied to Mr. Humphrey who worked on the Rivière du Loup and who got Mr. W. A. Allan of Ottawa to take an interest in their work. They then sank a second shaft through 60 feet of hard boulder clay, 4 feet of sand, 40 feet of blue clay, then decayed wood, vegetable matter, quicksand and sandy gravel, with clay containing much fine gold. A third shaft was also dug a few feet from the latter, but it filled with quicksand after reaching the gravel.

In 1885, work was resumed; pay gravel was struck at a depth of 165 feet and gold was found in paying quantities. The company proposed to sink another shaft and to develop the working. It is reported to have worked profitably and employed a fairly large number of men. This company was known as the St-Onge Gold Mining Company.

Mr Humphrey left the mine in 1886, and the St-Onge Brothers tried to continue, but abandoned the work through want of means. This mine must be presumed to have been but little productive although the indications of gold seemed very good.

In 1894, Mr J. Hardman, after visiting Beance, decided to explore along this creek and with the view of striking the old bed of the river, he had a tunnel commenced near the village of St George East, on lot 595 of the cadastre. This tunnel was continued a distance of 900 feet, meeting with some difficulties owing to the quicksand. It was subsequently abandoned in 1896, but will probably be opened up again some day. In his report for 1896, Mr R. Chalmers gives detailed information respecting the lands traversed.

POZER RIVER.

On the left bank of this river and higher up than the little St. Anne brook in the seigniory of Aubert Gallion, shafts were sunk on lot 354 by Messrs Humphrey, Allan and St. Onge, in 1882, about the time that they worked on the Slate Creek. The bed rock was reached at a depth of 40 feet, but work was not continued although gold was found. In the winter of 1897-98, a license was granted to Mr. Currie who sank a shaft 20 or 22 feet

deep on lot 355. He found 4 feet of arable soil, 13 feet of boulder clay, 6 feet of black cemented gravel, 3 feet of yellow gravel containing black sand, pyrites and slight colors. Work was stopped by water flooding the shaft which is a short distance from the Humphrey shaft.

STAFFORD BROOK

Gold was found on this stream and the Report of the Committee of Enquiry of 1865 mentions that gold to the amount of \$2,000, was taken out. Traces of these old workings are still visible.

Messrs Reed and Desbarats seem to have had an interest in these works probably under the name of the Chaudière and Stafford Gold Mining Company. More recently still, some very satisfactory prospecting was done; prospectors who panned there found \$7.00 worth on lot I, 18 of Jersey.

METGERMETTE RIVER

We take the following information regarding this river from the Report of the Committee of Enquiry of 1865:

Mr. John Kelly reports having prospected by means of sluices on the Metgermette river and having dammed it. He found an average of \$5.00 per man per day. He reports having found gold on the Oliva river; he also prospected on the Rivière du Loup near Monument river and found good indications there as well as at the mouth of the Oliva river.

Professor Seymour found \$480.00 worth of gold to the ton in the black sand of the Metgermette river where no gold was visible. Professor Hayes found \$400.00 to the ton in a black sand of the same river.

Mr. Arthur Rankin says that at a distance of half a mile above the Kennebec road, on that river, he had a hole dug 30 feet above the level of the water and in a couple of hours he found fifty cents worth of gold.

Mr. H. B. Ward prospected on the Metgermette at several points, working a couple of days at each one. He found gold nearly everywhere in evenly distributed quantities and sometimes he panned out 50 cents, \$1.00 and even more at a time; one panning containing 32 colors. He afterwards procured a rocker which was in bad order and in half a day he obtained from \$4.00 to \$7.00 worth of gold. In consequence of this, a small company was organized and Mr. Ward started on the 15th July 1864 with about 10 men for the Metgermette, where he built a dam and drained the river by means of a flume 260 feet long and a canal one hundred feet long. He afterwards dug another canal 275 feet above the dam. The work was done on very compact clay without striking the rock. About the 20th July, they found in the sluice about one ounce of coarse gold and in the evening of the same day they obtained the same quantity. On the following day, they got an ounce and a half of fine gold, the nuggets weighing nearly a pennyweight. There were then 6 men at work and when he returned after an absence of two days he again found one ounce and a half of gold. He transported his sluices higher up the river to several points, finding at times an ounce and at others half an ounce. He afterwards endeavored to sink a shaft, but was unable to reach the rock, owing to the abundance of water. He estimates that he worked about twenty days with 6 men and expressed the opinion that he would have found plenty of gold had he struck the rock.

Mr. Ward says that, in the autumn of the same year, prospectors found plenty of gold in his workings and that on returning there, in the month of November, and digging some holes under the snow, his companions washed two pans which yielded from \$2.00 to \$3.00 each.

The company that worked there was called the "Rivière du Loup Mining Company."

This information was repeated to me by Mr. Thomas Wilson, a miner who resides in the district and who has worked there from his infancy.

With the view of verifying the important facts mentioned in connection with this river, I inspected the localities and made inquiries among the residents of the region, but the result of this investigation led me to believe that the information given above should not be accepted as an indication of the richness of the said region. I had a slight amount of work done above the Kennebec Road, but found only a few and very fine colors in a gravel that seemed to rest on clay.

In 1880, Mr. Cassels, of Toronto, had some prospecting done on of the upper part of this river as well as on the Oliva, by his agent, Mr Chubuck, with about ten men. They sank a shaft but could not reach the bed rock on account of the water.

OLIVA RIVER

Mr. Edward Lyons prospected on the Oliva river and found numerous indications on blocks 3, 4, 5, 6, 7, by washing with pan and rocker. He built a sluice and worked on blocks 5 and 6 for several days as well as on block 3. He says that the bad weather and the abundance of water impeded him, but that he is convinced that with favorable weather he would have paid his expenses. He mentions in particular block 3 as showing much fine gold in the river bed.

GOSSELIN BROOK.

A shaft was sunk on the Gosselin brook in St. Victor de Tring, by Mr. Kennedy, who reports having found gold there.

DAAQUAM RIVER.

Mr. Pierre Patry, in the Report of the Committee of 1865, states that in the month of August, 1864, he explored the Daaquam river, as well as several streams that flow into it and found gold. He says that the indications are as good as on the Famine River and that there are several rapids suitable for washing. He also found gold on the Grande Coudée river, in Shenley, and on the Nebnellis river in Spaulding.

TOWNSHIPS OF SPAULDING AND GAYHURST

In these two townships a large area was bought about 1868 by Mr. George Desbarats. These lots comprising 5262 acres border on the Chaudière river and comprise a portion of the rivers Eugénie, Drolet and Nebnellis. It does not appear that much work was done on these properties; however, gold was found on them. Several shafts seem to have been sunk and when I visited

that district I observed some traces of old workings and I found color in washing gravel on the bank of the Drolet river.

In July 1883, Mr Newton began work on the river Engénie after some encouraging prospects, but he stopped in consequence of some disagreement in the company.

OTHER RIVERS

We may say that, in addition to the rivers above mentioned, gold has been found in all the rivers or brooks falling into the Chaudière from the Rivière des Plantes to the height of land or watershed. Prospecting to a greater or less extent has been done and I myself have washed gold in nearly all of them, finding at least some colors. I must therefore add to the above list the river du Bras, in Rigaud-Vaudrenil ; the rivers Gold Stream, Vachon, Travellers' Rest, Portage, Monument, Lindsay, in Linière ; Trout river, in Jersey ; Shenley and Grande-Coudée, in Shenley ; Samson and the tributaries of the Rivière du Loup in Risborough, besides others of minor importance. In 1864, some of them must have been prospected, for special surveys of mining lots were then made along these rivers.

QUARTZ

The reports made about the year 1865 frequently mention the quartz veins of Beance, and the Committee of Inquiry of 1865 contains the evidence of many persons who saw gold in the quartz, frequently in fairly large quantities ; others cite reliable authorities who have made assays and who state that gold was found in paying quantities. The reports of the Inspectors, especially that for 1866, give a table of the veins tested either in the laboratory or at the mill and which yielded satisfactory results. The report made by Messrs Michel and Sterry Hunt, in 1865, gives a list of the localities whose quartz was assayed sometimes with extraordinary results. The companies then formed mentioned the veins of quartz running through their properties and based their calculations of their probable profits on the working of those veins. Work was commenced at many points ; shafts were sunk to depths of from 40 to 50 feet and in 1866 the DeLéry Gold Mining Company put up a ten-stamp mill at the Devil's Rapid. A certain quantity

of quartz was tried, but does not seem to have yielded any satisfactory results, for the mill was abandoned.

I give below a summary of the works that were undertaken.

In the Report of the Committee of Enquiry, 1865, many assays are mentioned, some yielding a very high percentage of gold. Several of the witnesses examined claim to have seen gold in the quartz and make suggestions on the subject. However, the Committee came to no conclusion except that it says rather vaguely that a certain depth must be reached before finding gold in considerable quantities in the quartz (?)

In the report of 1866, by Mr. Pope, Mining Inspector, we see that in that year 14 shafts were sunk on quartz veins: 7 in the seigniory of Rigaud Vaudreuil and 7 outside of it. In the months of February and March, 47 men were employed and 1120 tons of quartz were got out. Some assays were made, three being on large quantities of 600, 900 and 1,300 pounds and three others on three pounds only. The results mentioned are extraordinary and I do not give them, for if they really represented the percentage of those veins I do not understand why they were not worked.

Shafts were sunk as follows :

By the Detroit Company, on lot 1 of Kennebec Road in Linière, near the boundary line, 40 feet deep, and at Jersey Point; by the Reciprocity Mining Company on the Kempt river near the Kennebec Road; by the Du Loup Mining Company, on the Metgermette river near the Kennebec Road; by the New York Company at Jersey Point and in the Cumberland *fief* (seigniory of Aubin de l'Isle.)

The following shafts were sunk in the seigniory of Rigaud Vaudreuil :

By Rigg & Co.—range 1 N. W. lot 83, a shaft 45 feet deep; by Kilgour and Fenton, St. Charles, 19 and 20; by the Reciprocity Mining Company, 19 de Lery; by Power, Causley & Company, range 1 N. W. 39; by Hamilton Smith & Company—range 1 S. W. 71.

In the report for 1866, we find a series of 31 assays made by Dr T. Sterry Hunt on specimens of quartz, reported by Mr A. Michel. These assays have since been reproduced in the reports of the Geological Survey and other reports relating to Beauce. They came from the following points, probably from the veins above mentioned: Linière 1, 2, 7, 6; Seigniory of Aubert

Gallion I, 30; Seigniorly of Aubin de l'Isle I 9; Seigniorly of Rigaud-Vandreuil I N. E. 39, 53, 59, 62, 83; St Charles 19, 21; de Lery 20.

Sixteen of these specimens contained no gold while the others yielded proportions that were sometimes considerable. It is worthy of remark that in two of these assays a speck of gold is mentioned as visible. The assays were made on 100 grammes of a specimen weighing 5 or 6 pounds taken at random from a larger quantity.

Other assays are mentioned in the same report, especially those made by Dr A. A. Hayes of Boston, and several also yielded extraordinary results. Mr Michel also cites some assays and says that he himself crushed and washed quartz sometimes in quantities of from 20 to 30 pounds which contained some color.

In Mr. Lockwood's manuscript report, we find an entire chapter devoted to the quartz veins. He mentions about twenty in the seigniorly of Rigaud Vandreuil, of which he gives the location, the names, the dimensions and the results that they yielded in various assays. Some of these veins are of great thickness, sometimes reaching 25 feet; others are a mile and over in length and the assays mentioned sometimes give a high percentage; shafts have been sunk on several of these veins, some being the same as those mentioned above. The veins in question are on the following lots of the seigniorly of Rigaud Vandreuil:

I Range N.-E. 47, 59, 62, 71, 75; St. Charles 7, 11, 12, 19, 21; De Lery 20, 23; Chaussegros 16.

Mr. Lockwood, throughout his work, expresses his opinion that the alluvial gold comes from these veins and states as an argument in support of his theory that the alluvial deposit contained much more gold in their vicinity. He also mentions the shaft on lot 7 of St. Charles in which a thickness of 40 feet of very fine white quartz contained gold.

In 1867, in consequence of the aforesaid experiments, a mill was erected by the de Lery Gold Mining Company in the vicinity of the Devil's Rapid, about a mile from the village of St. François; it was built of solid masonry and contained 10 stamps. Great hopes seem to have been based on this mill at that time. A quantity, I know not how much, was put through the mill which worked for several weeks only. The result seems to have been

nil as to the quantity of gold obtained. To explain this want of success, the insufficiency of the plant and the inexperience of those in charge were alleged. This mill with a portion of its plant is still in existence, but it has not been worked since.

In his report for 1884, the Mining Inspector, Mr. H. J. J. Duchesnay, says that pieces of gold weighing over an ounce were put into it and absolutely nothing was recovered of them.

The most important fact alleged in reference to gold in the quartz relates to the vein that runs across the Chaudière river at the Devil's Rapid, and all the reports mention an affidavit made by the Poulin brothers, declaring that on that vein they had collected in the space of two hours 12 ounces of gold and some specimens found solid in the vein weighed half an ounce. We have already mentioned the facts related by Mr. O'Farrell and others on the same subject.

In 1873 the Chaudière Gold Mining Company did some work on a vein of quartz on lots 16 and 17 of de Lery and claimed to have found rich quartz.

In 1884, we find some companies who were stopped in their alluvial mining, taking up quartz mining, among others the Canada Gold Company, Captain Richard and others.

In 1893, Mr E. B. Haycock, of Ottawa, put up a small mill at Jersey Mill, on the left bank of the Rivière du Loup, about a mile from its mouth. This mill, which was intended only as an experiment, had three stamps and was driven by steam. During the year 1894, he made several tests of quartz from various veins in the vicinity. The value of those tests induced Messrs John Blue & Eustis to make certain arrangements with Mr. Haycock with the view of verifying the importance of these veins. Shafts were sunk at various points, and the mill was in operation for several weeks of the winter of 1894-95 under the direction of an expert. I am not aware of the results that were obtained, but the works were abandoned and have not been resumed from that day.

The foregoing information gives the facts as they are related officially and there is no doubt that the distinguished chemists who made the assays have found gold. However, these results are open to discussion and here after I speak from my personal experience only. I have inspected nearly all the veins above mentioned and many others also. I have taken speci-

mens weighing some pounds from all or the majority of them, to the number of about fifty and I have had them assayed by Messrs Ledoux & Co, of New-York, and by others. In every case, the result has been "traces of gold" the highest mentioning 30 cents to the ton. In 1890, I shipped from a vein situate near Jersey Point a lot of 3,000 pounds of quartz and another of 800 pounds which respectively yielded \$3.65 and \$6.85 to the ton. From this same vein, by crushing and panning, I had obtained some colors. These assays were made in Nova Scotia. I saw, on several occasions in the hands of miners, specimens of quartz showing free gold, but I never saw any gold *in situ* in any quartz vein. I have also seen specimens of cavernous quartz showing gold, but it was alluvial gold which had evidently been imbedded in the cavities of the quartz, probably by the pressure of the boulders against the quartz. Whenever I have heard of gold having been found in quartz, I have investigated, but without result in every case. I have therefore come to the conclusion that in Beance no veins of quartz showing free gold were really known. I do not wish to cast any doubt on the good faith of those who claim to have seen some, but when Mr. Michel says that he found gold in quartz, he also says that he had to crush that quartz and wash it with the pan. I also obtained the same result, but I do not find my assays conclusive and I am rather inclined to think that those colors were due to a little alluvial gold adhering to the quartz.

When the Poulin Brothers say that they found gold in the quartz of the Devil's Rapid I am rather inclined to think that it was alluvial gold imbedded in the cavities of the quartz, as I had an opportunity of verifying at other points. As regards the Devil's Rapid, Dr Reed has informed me that a company that he represented, impressed by this pretended discovery, had caused work to be done and had extracted several tons of quartz which, when put through the mill, yielded no results.

With respect to those assays that mention gold without any gold being visible, the fact may be possible, for, in other countries, paying quartz has been found under the same conditions. The assays that seem to me the most conclusive in this respect were those made by Mr. Haycock, in 1894. I pointed out those assays in my report for the same year and I saw the mill in operation and the gold that had been obtained by treating certain lot, of quartz. I cannot say, however, that I saw any gold in that quartz. Subsequent assays do not seem to have yielded any results for, if they had, I do not see why veins of good thickness and a high percentage should not have been worked. Was the gold found in that assay, as I have already supposed, alluvial gold

adhering to the quartz? I cannot say, and those assays which are certainly the most thorough that have been made as regards the gold of Beauce, do not as yet settle the question.

Mr J. E. Hardman, an expert in gold-bearing quartz, who mined for a long while in Nova Scotia and who worked a little in Beauce, says that he never saw any gold in the quartz of that region, nor any vein worth the trouble of being worked and he has summed up the question by saying: "That productive veins exist in the region is very probable, for whence would the gold come that is found? But the veins of quartz that we know of have nothing to do with the origin of the gold that we found in the auriferous gravel."

I am entirely of the same opinion, but I would add that we must not despair of finding gold bearing quartz in some parts of Beauce and that searches in that direction should not be given up.

BLACK SAND

In washing the auriferous gravel more or less black sand is always found, which, owing to its density, remains with the gold at the bottom of the apparatus, the gold being afterward separated from it. This sand consists of magnetic, titanite and chromite iron and, in some cases, of iron pyrites and when all the gold has been removed—even the finest particles discernible by a magnifying glass—this sand, when subjected to chemical analysis, shows quantities of gold that are sometimes considerable. I cite the following assays mentioned in the Report of the Committee of 1865:

Mr. John Greacen mentions a specimen yielding \$575.00 to the ton of 2000 lbs.

Mr. Truman Coman, a specimen from the Rivière des Plantes, assayed by Professor Kent of New-York, \$513.83.

On the Metgermette, an assay by Professor Seymour gave \$506.00 to the ton and another by Dr Hayes over \$400.00. Other authorities mention percentages from \$20 to \$100.00. This black sand seems difficult to treat by the

ordinary chemical processes; probably the gold is covered with a coating of oxidized iron. Last year Mr. S. C. C. Currie commenced experiments for treating these sands by a process of his own and which, it appears, has had good results. In any case, the question is worthy of serious consideration and, beyond a doubt, important companies would take means to utilize this product.

CONCLUSION

The foregoing work is of necessity incomplete, for the most important works were done before my time and most of those who directed them have disappeared. Moreover no traces of them have been preserved officially. In visiting these old mines, I have, therefore, been obliged to listen to a good deal of hearsay evidence and to take from it what seemed natural. This work is therefore greatly open to criticism, but I think that we may safely draw the following conclusions from it :

I have mentioned a certain number of rivers where work has been carried on and gold has been found, but at a given moment work was stopped by the water and by the expense required for prosecuting the work. In one case, however, on the Gilbert, the work of searching was carried out to the end; sufficiently powerful pumps were used and it may be said that the results during the period from 1878 to 1883 were perfectly satisfactory and even remunerative in cases where the companies possessed enough territory. It may be said with reason that the valley of the Gilbert is the only one in which gold has been found in paying quantities, but we are free to believe, that the same means applied to other districts would produce similar results. Thus, previous to 1867, lots 15 to 20 of de Lery were considered as being about the only productive ones along the river and yet deep workings have caused ground just as rich to be found up to 9 and 8 of St Charles.

In the du Loup, Famine, des Plantes, des Meules and Metgermette rivers—to say nothing of the others—coarse gold in notable quantities has been found at certain points, but, for special reasons, the works were not continued. We may therefore hope that by prosecuting the explorations, the same results would be obtained as on the Gilbert. Some persons, but little acquainted with the technical side of the question, are under the impression that the Beauce gold mines have not paid. This is an error, if we

only consider that the money spent in law-suits should not be charged against the mining and it cannot be denied that legal difficulties have done the greatest injury to that region, while admitting that work there is of a difficult nature. On the other hand, the legal difficulties that impeded the development of that industry have disappeared and the Government has resolved to apply the law in a broad and liberal spirit. The trouble about small claims no longer exists, while miners are nevertheless given every facility for working on a limited scale.

I consider that this industry has a chance of succeeding by carrying on the work over large extents of territory and with the assistance of considerable capital. The employment of Boring machines have been suggested for the purpose of testing the ground down to the bed rock and this idea is a very practical one provided the machinery used be fully adapted to the purpose and be able to work as well through the quicksand as through the boulders that may be met with. The places most suitable for sinking shafts would thus be ascertained. Practice has already demonstrated that drainage by canals or tunnels is the most profitable. I have often been questioned as to the practicability of dredging in this province, but I consider that it would hardly be possible except in certain portions of the Chaudière and perhaps at some points of the larger rivers.

I therefore believe that companies with capital at their disposal, as well as sufficient land, have a chance of succeeding in Beauce under careful management. The Government owns the mining rights over the greater portion of these regions and even the surface in the unsettled districts and it can dispose of the same at prices within easy reach of all.

THE CHAUDIERE VALLEY

It is estimated that the basin of this river, which may be considered as gold-bearing, covers 15,000 square miles and, in fact, gold has been found at various points of that territory as established by the foregoing facts.

The geology of this region has been studied by the Geological Survey, which has published a map showing the various formations. I give a summary description according to these high authorities. The general formation belongs to the cambrian and cambro-silurian systems: the former consisting of schistous sandstones and the latter of argilleous schists. These forma-

tions have undergone upheaval due to dioritic eruptions, the main mass of which is in sight on high hills in the township of Cranbourne with ramifications extending on both sides of the Chaudière, but showing themselves chiefly in the valley of the Rivière des Plantes, where they are accompanied by serpentines. They cross the Chaudière river and appear on the other side on the Bras river and on the heights of the seigniorie of Aubin de l'Isle; the folds have a north easterly direction as may be seen by an anticlinal line running across the whole region.

The superficial geology has been studied by Mr R. Chalmers, who describes it as follows: surface, boulder clay; sometimes a little gravel; compact clay, gravel, quick sand, gravel and boulders, auriferous gravel, rock.

As to the origin of the gold it has given rise to various suppositions, but I consider that up to the present not one of them finally settles the question. However, it may be admitted that the alluvial gold of Beauce has belonged to quartz veins, but it cannot be said in what condition that quartz was at the time of the disintegration nor at what period it took place.

The disaggregated mass has been considerable and during a long series of geological epochs the beds of former rivers were excavated, wherein a long process of classification deposited the heavier portions, including gold in the lowest parts with gravel, worn and washed, and large boulders. This gravel was overlaid by stiller waters containing the finer particles constituting the fine sand and stratified clay. The glacial period covered the whole with a thick layer of boulder clay, thereby levelling the soil in which the present rivers afterwards excavated their beds.

MAP

To this work is added a map on the scale of one mile to the inch comprising all the gold bearing regions of the province. The information relating to mines is marked in red. The geological indications that we have deemed advisable to note are obtained from the map of the Geological Survey of Ottawa. It will be observed that the greater portion of the lands in this region belong to the Crown. This map has been compiled from the original documents of the Crown Lands Department and the plans of the Cadastre.

DISTRICT OF DUDSWELL

Gold has been found for some time in certain streams in the valley of the River St. Francis, especially in the townships of Dudswell and Westbury.

In the stream known as "Hall's Brook", gold was found long ago on lot IV-11 and the ruins of an old 10 stamp mill can still be seen which was built previous to 1880 by Mr Brook of Boston. I understand that this mill had been built to treat the stuff from the river itself, which contained much fine gold that was difficult to wash; I have, however, little or no information respecting the work of that period which must have been carried on to some extent judging by the debris to be seen in the upper part of the river. A shaft 28 feet deep was then sunk to the bed rock and a little gold was found.

About 1891, Messrs Charles Rodrigue and Louis Mathieu, Beauce miners began prospecting on this brook and found a little gold; one nugget being worth \$90.00: encouraged by these discoveries, they sank on the left bank and in the immediate vicinity of the river on lot IV-11, a shaft 52 feet deep which struck solid rock. They found a little gravel at the bottom and ran a drift 27 feet long which followed the rock in a descending direction, but without much results. The water was pumped out of the shaft by an ordinary wheel in the miner's fashion. This shaft was 400 feet from the former one. Another shaft was begun and 12 feet from the surface a large piece of unrolled conglomerate was found weighing several hundred pounds and containing numerous specks of visible gold. Work was suspended in 1894, after producing from \$500.00 to \$600.00 worth of gold from the brook. Besides the large nugget above mentioned, pieces worth from \$5.00 to \$10.00 were found. The materials of the quartz mill were removed in 1897, by Mr. Graff who used them in building another mill near the line of the Boston and Maine Railway.

These miners afterward prospected on other brooks in the vicinity known under the names of the owners of the land through which they run. Gold in small quantities was found everywhere. It may be said that all the brooks flowing from the mountains of Stoke contain gold. Small groups of miners worked on the Andrew, Row and Harrison brooks. On the Andrew, Mr Cunningham got out a few dollars' worth. On the Row, Messrs Sotero, Brown and Hanman got out about a hundred dollars, one nugget being worth \$10.00; Mr Walcott also worked a little in 1897. On the

Harrison, Mr Fred. Harrison got out about \$200.00 from lot 6 of Westbury, Mr Henry Hughey commenced prospecting in the spring of 1898 in the same brook, on lot XI, 28 of Stoke, that is above Fred. Harrison's work ; all this prospecting was done from 1895 to 1897, only a few men being employed.

The most important work was done on the Kingsey brook that runs through lots 3 in ranges III and IV of Dudswell. In 1894, the miners above mentioned worked in the bed of the brook and found gold in sufficient quantities, including several large nuggets. There were then 4 or 5 men employed. Mr H. C. Donnell took an interest in the mine, when the results led to an organization of a small company known under the name "Rodrigue Gold Mining Co." in 1896. A steam pump of one hundred horse power was put in with the object of carrying on hydraulic works or rather of removing the part over-laying the rich gravel by means of a powerful jet of water. The work of this company yielded about \$4,000.00 worth of gold, the largest nuggets being worth \$45, \$39, \$27. In 1897 the properties passed into the hands of Mr C. A. Parson of Boston who has not yet done any work. No shaft has been sunk, on this creek but only surface work was done. Gold is found chiefly in a bed of gravel a few inches thick resting on schists that are rather hard and with but few fissures, somewhat different from those found in Beauce. The valley of the stream is very narrow and the bed rock appears everywhere at a depth not exceeding a few feet. Work was done over a length of about half a mile and only in the bed of the stream. The land belongs to Mr W. Kingsey in range III and to the British and American Land Co. in the IV range.

On the Big Hollow brook, Westbury V. 11, work was done about 1882 by Mr Trenholme, the surface owners, who got out about \$75.00, a shaft about 25 feet deep having been sunk. In 1895, Mr. Louis Mathieu came and prospected with another miner and found gold in the bed of the stream. They then sank in 1897 on the left bank a shaft 33 feet deep which struck solid rock. The ground traversed consisted of the surface, a bed of gravel, three feet of clay and nine feet of gravel resting on the bedrock and they found a little gold. When I visited the works in May 1898, Mr Louis Mathieu was occupied with two other men in sinking a shaft 8 feet by 5 nearer the stream and was then twenty feet down. They hoped to strike the rock at a depth of about 50 feet, being then nearer the old bed of the river.

They set up a small water wheel to pump out the shaft. The quantity of gold found by Mr Louis Mathieu in the bed of the river does not exceed about one hundred dollars ; the largest nugget, found on the clay, weighed 19 dwts.

The indications of gold found in this district are different from those of Beauce, the gold being generally flatter and finer ; its origin seems also to be more recent and to be due to the disintegration of the veins of quartz existing on Stoke Mountain. Therefore there is not there what the miners call a "lead". The shafts that have been sunk have not yielded great results and the surface gold seems to have followed the course of those small brooks whose valleys are narrow and bordered by solid rocks. The only points which would seem to me to be favorable to the testing by means of shafts, would be the lower part of those brooks where their valleys widen. A remarkable fact is that rolled boulders of quartz are sometimes found containing visible gold which I never remarked in Beauce. On the Hall Brook there was found a piece weighing several hundred pounds of quartz conglomerate, crossed by small veins of quartz, in which gold is visible. These brooks are small and almost dry in summer.

The right to the gold mines in all these regions belongs to the Crown and the work has been done by means of mining licenses granted over small areas.

QUARTZ IN DUDSWELL

The miners' prospecting has led to the discovery of a small vein of quartz situate in the Gore of Westbury forming range 6 and the property of Mr, F. Harrison. This vein is from 2 to 3 inches thick and descends almost vertically in a quartzous conglomerate or arkose. Mr John Armstrong followed that small vein by means of a shaft fifteen feet deep and I personally noticed small colors of gold. A few hundred feet from there on lot IV south $\frac{1}{2}$ of 1 of Dudswell Mr. Charles Rodrigue sank a small shaft about twelve feet deep in similar rock and showed me pieces of quartz that he got out and that contained gold. These veins seem to be too small to be worked profitably, but it would be important to ascertain practically whether the surrounding conglomerate does not contain gold in paying quantities. A specimen of

that rock taken from the surface and which I had analyzed gave 0.08 ounces of gold and 0.08 ounces of silver to the ton, say, a value of \$1.65. Mr. R. Chalmers of the Geological Survey made an assay that gave 0.35 ounces, say, a value of \$7.00 to the ton. I consider that such assays on small specimens are worthless and that only tests with the mill on large quantities could be a guide as regards the future of that deposit.

The small quantities of alluvial gold found in the bed of the streams do not seem to me to justify the organization of large companies, but may suffice to provide a livelihood for small groups of miners. However, prospecting in this region should be encouraged with a view of searching for the quartz veins which must exist on Stoke Mountain whose formation is mentioned as being pre-cambrian or huronian.

DITTON DISTRICT

Gold seems to have been discovered in this district about 1866, but at first very little was got out. Afterwards, in 1868, Hon. J. H. Pope who became the owner of lands in this township, undertook to do some work and obtained the mining rights over an area of about 5000 acres covering lots VII 52 to 61; VIII 39, 40, 41, 44 and from 57 to 62; IX from 34 to 42, from 45 to 48 and from 50 to 53 inclusively.

The Mining Inspector reports that in the summer of 1866 4 or 5 men worked on lots 35 to 46 of range IX of Ditton and got about \$800.00.

In the valley of the Salmon River, of the Ditton and Little Ditton rivers from 1871 Mr. Pope had work carried on regularly during each summer with at least twenty men under the direction of Mr. Baxter. All the work was done on the surface, the pay gravel being struck at a depth of not more than from 15 to 20 feet and the largest nugget found being worth \$125.00. It is reported that on these lands a quartz boulder was found containing 6 ounces. This work was especially done on the lower part of the Little Ditton near lots 39 and 40 of range IX close to the road at a distance of 7 or 8 miles from Scotstown on the Canadian Pacific Railway and was almost exclusively done by Hon. J. H. Pope. In 1876, however a claim was granted to Mr. Ls Gendreau who got out a little gold and afterwards sold the claim which eventually reverted to Mr. Pope. About 1883 the work seems to have been aban-

done and yet permission to work on small claims was granted to former foremen of these mines, for when I visited them, I found small groups of miners who were earning enough to pay for their time.

The main working had been stopped for 5 years, when I visited these mines in July, 1889. Four parties comprising 9 miners were working in the vicinity of the old workings on Little Ditton (Ditton IX, 34, 35,) and on Salmon River (VII, 56). At the time of my visit, the largest party had obtained in one day by sluicing \$30.00 including a nugget of \$15.00.

In 1892 work was carried on during the summer by the Ditton Mining Company, Limited, of Toronto. Some small shafts were sunk and some machinery put up, but I am not aware of the result and operations were discontinued in 1893.

Gold has also been found in the same region in Chesham (III, 6) where a little work was done in 1872 and in Auckland near Malvina.

I regret that I am unable to give more details on this district notwithstanding its importance but I have been unable to obtain any more, for the mines had been stopped for some time and the parties who were formerly interested in them had disappeared. However it is estimated that about \$100,000.00 was taken out from a surface area of about 2 acres and by rude processes in about ten years. Much therefore remains to be done and this district might be successfully developed.

GOLD MINES IN THE VICINITY OF SHERBROOKE

Gold has been found in a great many small brooks falling into the Magog river and about 1863 a certain amount of excitement seems to have prevailed in connection with the extraordinary discoveries made there and which led to the formation of companies with considerable capital, such as the Golconda Mining Company and the Ascott Gold Mine Company. However, these companies do not appear to have been a success, for their works were abandoned. Gold exists nevertheless in the brooks in question and this has, from that time, enabled some small groups of miners to make a living.

GOLCONDA MINING COMPANY. This American company was organized about 1863 by General Adams of the United States to work the west part of 1 and lots 2 and 3 of range III of Ascot, making a total of 450 acres. These lots are crossed by a brook containing a small volume of water called the Grass Island brook and falling into the Magog river. We have no complete information respecting the works of this company which operated for a couple of years and, according to some, got out large quantities of gold. A two-stamp mill was also erected to crush the quartz, several veins of which cross the brook and a shaft 30 feet deep was sunk on one of these veins. The quartz was first calcined in heaps, then passed through the mill and it was claimed that it yielded \$10.00 to the ton. A dam was built on this brook to keep back the water used for sluicing. In the catalogue of the Sherbrooke Exhibition in 1865, a specimen weighing 10 ounces is mentioned as coming from this mine. Colonel Charles King, the present owner, showed me a lot of 4 to 5 ounces of nice gold, of fair size, that came from these lands. The same company also owned the copper mine known as the Suffield in the same region. About 1880 these properties were again worked by Mr. A. Bowen and Mr. Stewart and are reported to have yielded a little gold. They were afterward abandoned and are now the property of Colonel Charles King of Sherbrooke. We see mentioned in a report by Mr Hunter that these mines yielded \$6.00 per man per day, some pannings giving \$2.00. In Mr. Michel's report in 1866, he says that he visited this mine in June 1865 and that at that time several workmen were engaged in washing auriferous gravel, while the others built a dam and erected a mill. He says that the quantity of gold shown him as being the result of one month's work, and as the washing of numerous pans of gravel, gave him a favorable opinion of this alluvial deposit which, however, a subsequent examination of the brook in question greatly modified. I also observed quartz which, if not gold bearing, was abundant. When I again visited this mine at the end of August, I noticed that the stratification of the alluvial deposits was different from what I had observed in the other mines of the same township.

There we find three layers below the arable soil: the first is a yellowish clayey gravel containing grains of pyrites and a little fine gold; the second is a layer of large grains and pieces of quartz and slate cemented with a blackish clay without gold; below a layer of ferruginous gravel containing more gold than the upper layer. The average thickness of the whole of this deposit was about 6 feet. The mine was

abandoned in September 1865. In the Report of the Commissioner of Crown Lands for 1866 we find the following: "The plant of this company consists of an engine of 40 horse-power, two double stamps and two amalgamators capable of crushing three fourths of a ton of quartz per day." It says that these mills crushed the tailings as well as the quartz and that \$13.00 to the ton was obtained, but that there was considerable loss owing to the pyrites and that the tailings of the amalgamators after being roasted yielded as much as \$60.00 to the ton. He adds that the quartz gave from \$5.00 to \$7.500 to the ton. The company was to increase its plant and considerably extend its works. He cannot give the quantity of gold obtained during the season owing to the absence of the manager, but the work was of an experimental character.

I visited this property in May 1898, and found there an old miner named A. S. Christie, who says he is quite familiar with all the streams in that region, and that he has earned his living for many years by washing for gold there. He claims to have made from \$2.00 to \$3.00 a day. The largest nugget that he has ever found was worth \$4.50. This stream has certainly been worked a great deal especially between the old line of railway and the present road. All the disturbance of the soil in the valley can be observed to a width of a couple of hundred feet. The river runs in a northerly direction and the bed rock is struck at a depth of from 4 to 6 feet. It consists of a somewhat compact slaty schist running North East and dipping 20° South East. The remains of an old and very long dam may be seen as well as a shaft 8 by 5 in the quartz and debris of calcined quartz. We can also see the building where the mill was and a great quantity of tailings. I washed some panfuls and found color; the assay of a small specimen of quartz gave me only traces. I cannot say whether mining has been done over the entire valley, but Christie says that there are many places that have not been touched. All the work done is on the surface. The people of the neighborhood say that much gold has been got out of this brook and even give figures which I do not repeat because they do not seem to me to be well founded.

In his report Mr. Michel states that he himself made several prospects on lot 6 range XIII of Ascot, in the bed and on the banks of the same brook and found gold in gravel, the rock being at an average depth of 6 feet. On the neighboring lot 6 of XIV, he made several excavations without finding gold or even gravel; moreover, the shafts, one of which was 16 feet deep, did not strike bedrock.

ASCOT GOLD MINING COMPANY.—In the same report we find that this company worked on lot 11 of range XI and an extract from the Sherbrooke Gazette of the 18th November is cited which says that, from the 20th October to the 14th November, gold to the amount of \$996.00 was taken out. The work has since been abandoned.

THE ROCK FOREST GOLD MINING CO. Limited.—Mr. C. E. Kennedy of Stanstead has long been interested in explorations for gold in this region and has prospected on the Felton brook in particular. In the fall of 1897, he did some prospecting from September to November and found a little gold, the largest nugget not exceeding \$2.00. However, the miner Christie, of whom I have already spoken, claims to have found a \$5.00 nugget; Mr. Kennedy reports that previous to these workings prospecting had been done on a small scale and that one day, gold to the amount of \$33.00 was found within a very small space and on another occasion \$12.00. When I visited these works in May 1898, there were 5 men employed since the month of March and their number had sometimes been increased to 7. Bed-rock was struck at a depth of not more than 7 or 8 feet. However, on the right bank a shaft 15 feet deep was sunk which had not yet struck the rock. The bedrock is a schistous tale which crumbles under the shovel. The gold is found in a bed of gravel and appears to be rather irregularly distributed. The works consist in cuttings in the bed of the brook and on the banks; the valley is a couple of hundred feet wide and the bed rock appears a short distance to the south-east. There are there two layers of gravel separated by a little clay, the upper layer containing a little fine gold. Mr. Kennedy is about to organize a company under the above name which will also engage in other mining operations. The workings are on the south half of lot 8 in range XI of Ascot. Washing is done with sluices and a puddling machine has just been put up. Hitherto about a hundred dollars worth of gold has been got out.

TOWNSHIP OF ORFORD.—Mr Michel inspected lot 19 of range V and found gold by digging small shafts in the beds or on the banks of two streams that fall into the Magog river; out of 5 shafts 3 showed him gold. One of these shafts is 29 feet deep, the clay resting on the bed rock. At the surface a little gravel was met with in which a little gold was found.

In the autumn of 1897, and in the spring of 1898 some prospecting was

done on the Red brook that falls into little Lake Magog, by the representatives of the Canadian Mining Exhibit Co. The works seem to be on lot 17 or 18 of ranges VIII and IX. Small quantities of gold are reported to have been found.

OTHER INDICATIONS OF GOLD

In addition to the principal districts above mentioned, gold has been found at various other points. Mr Michel mentions having found important quantities in a brook running through lot 1 of range A of Lambton and falling into Lake St Francis. He states that the work was done about ten years previous to his exploration and that shafts were sunk to a depth of thirty feet without striking the bed rock. He says that he found an appreciable quantity of fine gold in gravel resting on yellow clay and in that clay which was very hard and contained many boulders he found no traces of gold. He also made searches on lot 8 of range A, on what he calls the river of Lambton and found gold in a bed of gravel resting on disintegrated schist. He observed that the gold was very angular and not rolled. I am not aware of any work having been done in that district and when I visited it some years ago I noticed nothing worthy of attention and found only some colors in the bed of the above mentioned brooks.

In 1897, I visited the little river Hatley that discharges into Lake Massawippi. Some work had been done during the previous season by Mr. Wm. Starke who found a little gold.

He washed with the sluice the stuff taken from the bed of the brook and also worked a small quartz vein that does not seem to me to be different from the unproductive quartz veins known to us. This work was done on lot 14 of range VI of Hatley. I washed some pansful and found a little color in each. The quartz that I assayed gave me only traces. This brook has long been known as having yielded gold. In the part that was worked the bed rock shows on both sides. I am told that about thirty years ago Mr. Leclerc, of Montreal, worked there and got out about \$750.00 worth, the largest nugget being worth \$5.00.

About 1885, Messrs John McCaw and Caverhill worked on the Ragnet

Creek, Ireland, Megantic. When I visited these works they were making small excavations along the creek, in a fine gravel in which a little gold was found. I was shown a nugget worth several dollars that was found there. The work has since been stopped and I have heard nothing further about that stream.

In the seigniory of St. Giles de Beaurivage, in the Handkerchief concession, the reports of Geological Survey mention that gold was found and the Chaudière Mining Company worked quartz veins that were asserted to contain gold. It is also stated that a little gold was found in the Palmer river which flows through that region.

It must also be remembered that small proportions of gold exist in several of the copper areas of the Eastern Townships and the Nut brown shaft on lot 15 of range XIV of Leeds is mentioned in which native gold was found in a vein of quartz and feldspar containing rich copper ore. I saw a specimen showing gold which I was assured came from this working.

It is claimed that gold has been found in other parts of the province, but I have seen nothing in the districts that I have visited to justify that assertion. In the county of Ottawa, in particular, searches have been undertaken several times, but without result. The report of the Geological Survey for 1878 states that in the township of Wakefield apatite was found containing a small piece of gold, but this is accidental. It may also be observed that the magnetic pyrites found in the Laurentian formation, when assayed, show traces of gold.

PRODUCTION OF GOLD

It is very difficult to estimate the exact quantity of gold yielded in the province owing to the uncertainty and irregularity of the companies' returns. Nevertheless we give the following figures taken from the reports of the Crown Lands Department, the only official figures that exist :

Up to 1846.....	\$	300 00
From 1847 to 1850.....		1100 00

1863.....		18000 00
1866.....		8700 00
1867.....		31000 00
1868..... 1st quarter.....	303 ounces 0.23	
2nd ".....	432 " 12.7	
3rd ".....	336 " 17.12	
4th ".....	324 " 16.23	
1870 (18 months ending 31st De- cember of that year).....	1455 " 16.13	\$ 75406 65
1876-77.....	382 " 17.14	
1877..... 2nd half.....	688 " 19.12	
1878..... 1st ".....	246 " 16.3	
"..... 2nd ".....		13617 75
1879..... 1st ".....		15469 63
"..... 2nd ".....		17502 22
1880..... 1st quarter.....	228 ounces 8.	5047 00
2nd ".....	634 " 6.22	10432 92
2nd half.....		33174 00
1881.....		56375 31
From 1st April 1879 to 20th Sept. 83-7902 ounces 2. 4		140262 30
Making a total of.....		\$ 303856 33

It will be observed that there is no report for the years comprised between 1870 and 1876. The quantities of gold obtained in Ditton are not given. Moreover a great deal of work was done on lands in litigation and the quantity of gold obtained could not be ascertained. It will thus be seen that the above total is far below the actual yield and this has on several occasions been admitted in the reports of the Inspectors. In the opinion of many competent persons the total amount of gold obtained in the province amounts to not less than two million dollars. It is claimed that the mining surface of lots 16 to 21 of the de Lery concession on the Gilbert has not yielded less than \$700,000.00, the practical yield of the gravel being about \$2.25 to the cubic yard.

I also give below some figures taken from various reports or obtained from reliable persons :

Dr. James Douglas, Rivières des Plantes, 1847 to 1850.	\$ 3000 00
Rivière du Loup 1851	1826 00
" " " 1852	2496 00
" " " 1852 Geological Survey.....	124 00
The Poulin Brothers, 4 men, by panning in one day on lot 19 de Lery, in 1863, 72 ounces	1200 00
John McRae, 15 de Lery	50000 00
Nash & Co. 15 de Lery, about 1867.....	40000 00
Poulin & Co. 13 de Lery	4428 00
Lockwood Company, 14 and 15 de Lery	13540 00
Canada Gold Co. 12 St. Charles, up to 1883.	65855 00
St. Onge Co. 11 and 12 St. Charles, up to 1883.	85090 00
Gilbert River Gold Mining Co. St. Charles, before 1883	125000 00
Gilbert River Gold Mining Co. St. Charles after 1883.	28000 00
Beauce Mining and Milling Co. 14 de Lery.....	80000 00
Clarence Mining Co. 13 de Lery, up to 1st Nov. 1881.	13228 00
American Co. from 1892 to 1894.....	3700 00
From lots 18 and 19 it is estimated that there has been taken out.....	180000 00
Mr. Lockwood estimates that from lots 16 to 21 there has been taken out up to 1870.....	500000 00
Stafford Brook before 1865	2000 00
Ruisseau des Meules	5000 00
Rivières des Plantes, in 1883	2700 00
Slate Creek.....	5000 00
District of Dudswell.....	5000 00
District of Ditton	100000 00

In Beauce, gold is current coin and several persons have told me that they have bought considerable quantities of it, among others a merchant of St. François who got about \$25,000.00 worth of it.

Taking all these figures into account, it will be seen that the amount of \$2,000,000 is not exaggerated.

I give below a copy of a certificate of the American Mint.—which was communicated to me by Mr. Ph. Augers—of two specimens of gold recently obtained from the Gilbert:

	No. 1	No. 2
Weight before melting in ounces	56.34	12.00
“ after “ “	55.14	11.90
Fine gold per 1000	874.½	879.00
Value of gold	\$996.79	\$216.23
Value of silver	3.41	0.70
Charges	3.31	1.50
Net value	996.89	215.43

NOTE

Fine gold corresponds to 1,000 or 24 carats and is worth \$20.67 the ounce.

The pound troy is equal to 373.24 grammes = 12 ounces = 20 pennyweights (dwts) = 480 grains.

LIST OF LANDS SOLD FOR GOLD MINES

SEIGNIORY OF RIGAUD-VAUDREUIL, 71,000 ACRES

Patented to Dame Marie Josephite Fraser and others 18th September, 1846

LINIÈRE

Metgermette River (South Branch).

Lot No.	1.	patented	22nd	July	1864	to	William	Dunn
“	2.	“	22nd	“	“	to	Richard	S. Cassels
“	3.	“	19th	June	“	to	Robert	Bell
“	4.	“	26th	July	“	to	Noël	H. Bowen

Lot No.	5.	patented	23rd	July	1864	to	George Kilbourne
"	6.	"	12th	"	"	to	Richard S. Cassels
"	7.	"	19th	"	"	to	Robert Bell
"	8.	"	26th	"	"	to	Noël H. Bowen
"	9.	"	13th	"	"	to	George Kilbourne

N. B.—All the above lots are $23\frac{3}{4}$ acres, while all the following are 25 acres.

North Branch

Lot No.	1.	patented	18th	July	1864	to	Robert Bell
"	2.	"	25th	"	"	to	Richard S. Cassels
"	3.	"	23rd	"	"	to	William Dunn
"	4.	"	25th	"	"	to	Noël H. Bowen
"	5.	"	23rd	"	"	to	George Kilbourne
"	6.	"	25th	"	"	to	Richard S. Cassels
"	7.	"	23rd	"	"	to	William Dunn
"	8.	"	25th	"	"	to	Noël H. Bowen
"	9.	"	23rd	"	"	to	George Kilbourne
"	10.	"	18th	"	"	to	Robert Bell
"	11.	"	23rd	"	"	to	William Dunn
"	12.	"	18th	"	"	to	Robert Bell

Traveller's Rest River.

Lot No.	1.	patented	6th	September	1864	to	Thomas Reynolds
"	2.	"	7th	"	"	to	L. McDougall
"	3.	"	8th	"	"	to	Andrew Wilson
"	4.	"	9th	"	"	to	Thomas Morland
"	5.	"	6th	"	"	to	Thomas Reynolds
"	6.	"	7th	"	"	to	L. McDougall
"	7.	"	8th	"	"	to	Andrew Wilson

Oliva River.

Lot No.	1.	patented	29th	August	1864	to	Richard S. Cassels
"	2.	"	27th	"	"	to	Robert Bell
"	3.	"	30th	"	"	to	George Kilbourne
"	4.	"	29th	"	"	to	William Dunn
"	5.	"	30th	"	"	to	Noël H. Bowen

Lot No. 6.	patented	27th	August	1864,	to Robert Bell
" 7.	"	30th	"	"	to George Kilbourne
" 8.	"	29th	"	"	to William Dunn
" 9.	"	27th	"	"	to Robert Bell
" 10.	"	29th	"	"	to Richard S. Cassels
" 11.	"	27th	"	"	to Robert Bell
" 12.	"	29th	"	"	to Richard S. Cassels
" 13.	"	30th	"	"	to Noël H. Bowen
" 14.	"	27th	"	"	to Robert Bell

Portage River.

Lot No. 1.	patented	1st	September	1864	to McDougall
" 2.	"	5th	"	"	to Andrew Wilson
" 3.	"	5th	"	"	to Thomas Morland
" 4.	"	5th	"	"	to Thomas Reynolds
" 5.	"	1st	"	"	to Donald McDougall
" 6.	"	5th	"	"	to Andrew Wilson
" 7.	"	5th	"	"	to Thomas Morland
" 8.	sold		"	"	to Thomas Reynolds

 METGERMETTE NORTH

Metgermette River (South Branch).

Lot No. 10.	patented	22	July	1864	to William Dunn
" 11.	"	19	"	"	to Robert Bell
" 12.	"	22	"	"	to William Dunn
" 13.	"	23	"	"	to George Kilbourne
" 14.	"	26	"	"	to Noël H. Bowen
" 15.	"	22	"	"	to Richard S. Cassels
" 16.	"	19	"	"	to Robert Bell

METGERMETTE SOUTH

Travellers Rest River.

Lot No.	8.	patented	7	September	1864	to	Thomas Morland
"	9.	"	8	"	"	to	Thomas Reynolds
"	10.	"	9	"	"	to	Donald McDougall
"	11.	"	9	"	"	to	Andrew Wilson
"	12.	"	7	"	"	to	Thomas Morland
"	13.	"	8	"	"	to	Thomas Reynolds
"	14.	"	9	"	"	to	Donald McDougall
"	15.	"	9	"	"	to	Andrew Wilson
"	16.	"	9	"	"	to	Thomas Morland

Portage River

Lot No.	9.	patented	5	September	1864	to	Donald McDougall
"	10.	"	5	"	"	to	Andrew Wilson
"	11.	"	5	"	"	to	Thomas Morland
"	12.	"	1	"	"	to	Thomas Reynolds
"	13.	"	5	"	"	to	Donald McDougall
"	14.	"	5	"	"	to	Andrew Wilson
"	15.	"	5	"	"	to	Thomas Morland.
"	16.	"	5	"	"	to	Thomas Reynolds

RISBOROUGH

Rivière du Loup.

Lot No.	1.	patented	13	June	1864	to	Duncan McDonald
"	2.	"	13	"	"	to	Alex. Munroe
"	3.	"	13	"	"	to	Wm. Mc D. Dawson
"	4.	"	13	"	"	to	Alex. Munroe
"	5.	"	13	"	"	to	Wm. Mc D. Dawson

Lot No.	6.	patented	13	June	1864	to	Duncan McDonald
"	7.	"	13	"	"	to	Alex. Munroe
"	8.	"	13	"	"	to	Win. Mc D. Dawson
"	9.	"	13	"	"	to	Duncan McDonald
"	10.	"	13	"	"	to	Win. Mc D. Dawson
"	11.	"	13	"	"	to	Alex. Munroe
"	12.	"	13	"	"	to	"

West Branch

Lot No. 13, patented 13th June 1864 to S. J. Dawson

N. B.—All the lots of Risborough are of 100 acres. All the river blocks above indicated were sold at \$2.00 per acre in virtue of the Order-in-Council of the 22nd April, 1864.

 WATFORD (Dorchester) :

III. A. B. C. to 19 inclusively, 21 to 27.

IV 4. 5. 7. to 27, total 4951 acres, patented on the 5th March, 1867, to Thos. McGreevy, at \$1.00 per acre, under the terms of the Order-in-Council of the 12th April, 1865.

 DITTON (Compton) :

VII 52 to 61 inclusively.

VIII 39. 40. 41. 44. 57 to 62.

IX 34 to 42, 45 to 48, 50 to 53 patented 1st June 1866 to Hon. Mr. Sawyer.

X 34¼ N. patented 21st March 1866 to J.-H. Pope.

Mining patent confirmed 14th July 1880, under regulation of 1874.
5000 acres at \$1.00.

GAYHURST.

Lots 1 to 26 of range I and lots 24 and 25 of ranges II. III. IV. V.
2832 acres : patented 3rd December 1868 to heirs of Geo. Desbarats.

SPAULDING

Lot I. 25, 44 acres, patented 17th November 1868 and lots I. 1 to 24. 26
39, 2386 acres, patented 30th March 1869 to heirs of Geo. Desbarats.

All these lots as well as those of Gayhurst were sold at \$1.00 per acre
under the terms of the Order in Council of 12th April 1865.

LINIÈRE

RANGE I

Lots 2, 3, 4, patented 18th September 1865 to W. Russell

N. B.—These lots contain 102 acres, and were sold at \$1.00 per acre.

RANGE II (Section C)

Lots 48, 51, 52, 53, patented 21st August 1865 to Wm. McDonald
Dawson.

N. B.—These lots contain 200 acres and were sold at \$1.00 per acre.

r blocks
Council

867, to
Council

on. Mr.

MARLOW

(Kennebec Road)

Lot No. 1, patented 29th June 1837 to L. F. de la Gorgendière, 90 acres.
 " A. part. East patented 25 November 1865 to Chs. Ogden, 232 "

RANGE XI

Lots 3, 4, 5, 6, 7, patented 18th June 1877 to Will. Breakey and legal representatives of Edward H. Murney.

RANGE XII

Lots 1, 2, 3, 4, 5, patented 18th June, 1877 to W. Breakey and legal representatives of Edward H. Murney.

N. B.—All these lots contain 200 acres and were sold at \$1.20 per acre.

 METGERMETTE

RANGE VIII

Lots No. 11 and 12,	patented 27th Feb. 1871	to Caleb Holyoke.	140 acres
" 13,	" 12 Sept. 1879	to Michael Cahill	42 "
" 14,	" 12 " "	to "	43 "
" 15,	" 12 " "	to Edw. J. Cahill	65 "
" 16,	" 12 " "	to "	75 "

RANGE VII

Lot No. 11, patented 27th February 1871 to Caleb Holyoke 138 acres

RANGE IX

Lots No. 1 to 5, patented	27 Feb. 1871	to Edward J. Cahill	364 acres
" 6 to 9 "	27 " "	to Michael Donovan	400 "
" 10 and 11, "	27 " "	to John Murtha	189 "
" A. B., "	27 " "	to Caleb Holyoke,	148 "
" 13 N. "	17 Sept. 1879	to James Cahill,	102 "
" 14 N. "	17 " "	to " "	84 "
" 15, "	17 " "	to " "	68 "

RANGE X

Lot B.A. patented	27 Feb. 1871	to Will. Murtha	187 "
" 1 to 4, "	27 " "	to " "	383 "
" 5 to 8, "	27 " "	to " "	400 "
" 9 to 12, "	27 " "	to " "	400 "

The foregoing lots of Metgermette were sold at \$1.00 per acre.

RISBOROUGH

RANGE I

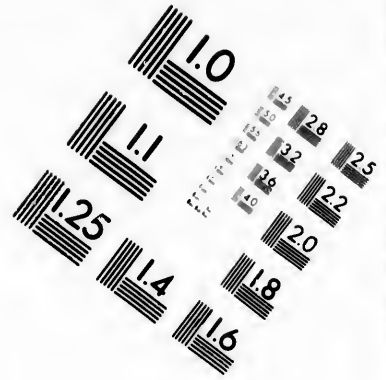
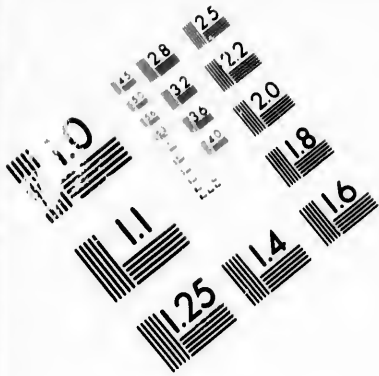
Lot No. 1 patented	9 Feb. 1885	to C. P. Champion	120 "
" 2 "	9 " "	to D. E. Thompson	120 "

RANGE XIV

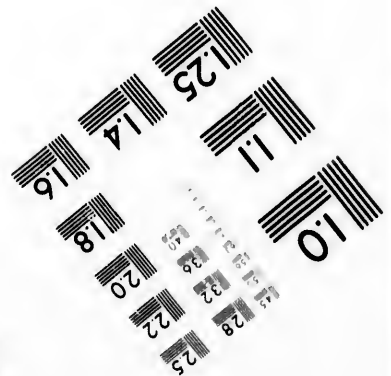
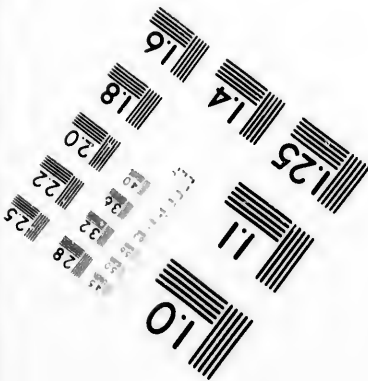
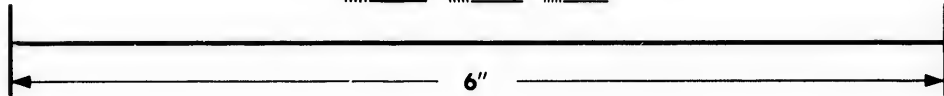
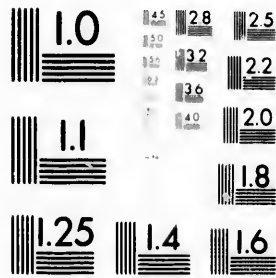
Lot No. 1, patented	8th February 1882	to Wm. Breakey,	200 acres
" 2 ½ N. E. patented	7th April 1881	to Hamel, Hughes, Armstrong,	Blanchet 100 acres
" 3, patented	7 April 1881	to Hamel, Hughes, Armstrong, Blanchet,	200 acres

RANGE XV

Lot 1 ½ S. E., patented	29th December 1880	to Hamel, Hughes, Armstrong, Blanchet,	100 acres
" 2, patented	29th December 1880	to Hamel, Hughes, Armstrong, Blanchet,	200 acres
" 1 ½ N. W. patented	3rd March 1892	to J. Buchanan & Breakey	100 acres



**IMAGE EVALUATION
TEST TARGET (MT-3)**



**Photographic
Sciences
Corporation**

23 WEST MAIN STREET
WEBSTER, N.Y. 14580
(716) 872-4503

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RANGE XVI

Lot 1 S. W., patented 29th December 1880 to Hamel, Hughes, Armstrong, Blanchet, 87 ½ acres

N. B.—All the above lots of Risborough as well as the following of Marlow were sold at \$2.00 per acre in accordance with the general mining act of 1880.

 MARLOW

RANGE V

Lot 1 ½ N. W. of ½ S. W. patented 3rd March 1882 to John Buchanan & Geo. Breakey, 50 acres.

RANGE VI

Lot 1 ½ N. E., patented 23rd September 1882 to James Armstrong and transferred 26th May 1886 to Jas. Morgan, 93 acres.
 Lot 1 ½ S. W. patented 29th December 1880, to Hamel, Hughes, Armstrong, Blanchet 100 acres.

RANGE VII

Lot 1 patented 8th February 1882 to W. Breakey & Wilson 200 acres.

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